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Catalogue

of

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INDEXED

FRUIT GROWERS AND Nurserymen.

GENEVA, N.Y.

ESTABLISHED
1846.

W. F. HUMPHREY, HORTICULTURAL PRINTER, GENEVA, N. Y.

Illustrated Descriptive Catalogue

Climbing Vines
Plants
Rose Bushes, etc.

Fruit and Ornamental Trees

together with
valuable hints
on the . . . . .

Selection, Propagation and Care of Stock . . . . .

Spray Calendar and Formulas

Grape Vines, Small Fruits and Shrubs

PRESS OF W. F. HUMPHREY, GENEVA, N. Y.

INTRODUCTION.

IF a fruit tree be grown on wet land and its cultivation neglected, it will become a diseased tree, whether grown east or west; the disease first showing itself at the heart. This is a fact so well established we suppose none will deny it; but it is equally certain that fruit trees grown in the northwest will become diseased in forty-nine out of fifty cases, for reasons which we have stated, nor is it in the power of man to hinder this result, since the climate is such that it cannot be otherwise.

In further confirmation of our position, let it be borne in mind that the pith of a healthy tree is pure white, and the first indication of disease is coloring of the pith, and as the disease increases the color deepens and extends from the pith outward, and the tree begins to die at the heart. The process is: 1st, Coloring of the pith; 2d, the wood becomes dry and finally decays. All this time the tree may be making wood, and to the inexperienced eye appear healthy, carrying up its sap regularly between the bark and the wood, as in a healthy tree.

On the other hand, trees grown in Western New York do not make such rapid growth on account of mists in the atmosphere, partially obscuring the rays of the sun. The weather most of the time during the fall months, is cold and raw, retarding the growth of the tree, *and ripening slowly and surely the wood made during the summer*, thus preparing it to resist the severe frosts of winter.

The question may be asked: If the climate of the northwest is so unfavorable to the healthy growth of fruit trees, will not eastern trees when taken there and set out in the orchard row, be equally affected by the climate? *To this we answer that a tree which has attained to the age of three years in the nurseries of Western New York is in a sound and vigorous state, and if of a variety known to be hardy in the northwest it is far better prepared to resist the sudden changes, than a tree grown there, for the same tree, if set out as a young bud there, would make a growth too rapid, and during the time it was changing from tender infancy to mature age its constitution would be hopelessly impaired.* These facts show conclusively that the idea of western nursery grown trees being superior to eastern is a great error; since, in the one case, we have a sound, healthy, hard wood tree whose wood has been ripened up year by year until it is able successfully to resist the changes of their fickle climate; and in the other case, we have a tree whose unripe wood has been frozen from year to year, and its sap blighted, until its constitution is impaired, and it has become a thoroughly diseased tree.

From these facts we learn what experience also proves, that eastern-grown fruit trees, transplanted in the west and northwest, other things being equal, will make far better orchards than trees grown in western nurseries.

SOIL.

Great advantages are claimed for the SOIL AND CLIMATE in this vicinity, in the production of HEALTHY, LONG-LIVED trees. This is a matter of the greatest importance to every planter. Not a year passes that we do not receive additional testimony to the fact that trees grown upon our HEAVY, STRONG, RICH well drained soil, are HEALTHIER, LONGER-LIVED, LESS liable to injury from extreme cold, and MORE productive than when taken from a light soil. A fruit tree grown *sound* and *healthy* from the *start*, will transplant successfully into any soil that is calculated to continue its growth.

FRUIT DEPARTMENT.

HOW OUR STOCK IS PROPAGATED.

Apples, Pears, Plums and Cherries.—Our one idea in propagating stock is to solve the question "how can we grow the healthiest and hardiest stock?" and not "how can we grow it cheapest?" By the process known as "root grafting" we could grow apple trees at much less cost than by budding, and for a time make a larger profit on them. If we sell to a man a second time we must please him the first time, and this we cannot do with root grafted stock as ordinarily done on piece roots.

We make this exception, however, to the rigid rule of Nurserymen of less experience, namely a few and only a few varieties make just as strong roots and as straight, thrifty and in every way desirable trees by grafting on *whole roots*, (not on piece roots) as by budding. Over thrity-five years experience and observation confirms this fact to us.

Root grafting is done as follows: Apple and pear seedlings of one year's growth are dug in the fall and packed in sand. In the winter, the tops are cut off and the roots cut into small pieces about three or four inches long. A small piece of twig called a "scion," taken from a tree of the variety desired to be propagated, is grafted, by a series of cuts, on one of these small pieces of root. The wounds are then tied up with a string, and the grafts packed in sand ready to plant the next spring in nursery rows.

FIG. 1.

The budding process is as follows: Large one-year seedlings are used; those which fail to reach the size of one-fourth to seven-sixteenths of an inch in diameter the first year, are transplanted and grown a second year. The seedlings are dug in the fall, packed in sand in the cellar, and early in the spring set out in rows, in the nursery. Having strong roots and *all of them*, they make a good growth by mid-summer, when they are "budded." This is done by cutting a perpendicular slit in the bark *on the north side of the seedling* (so that the bud is shaded by the seedling itself), a cross slit is made at the top of the perpendicular cut, and the two lower corners of bark carefully peeled back from the wood. Then a leaf bud, cut from the same season's growth of the variety desired to be propagated, is removed with both the bark and a thin slice of wood attached (Fig. 1, *a*), and slipped down into the cut on the seedling (Fig. 1, *b*), and the incision bound around with basswood bark or raffia (Fig. 2), so as to exclude air and water, until the bark of the "bud" has joined with the bark and wood of the seedling. The tie is then cut off, and the *bud remains dormant until the following year*, while the root continues growing. The following year the seedling is cut back to three or four inches above the bud (at *a* Fig. 3), and all sprouts taken off and kept off, so as to throw all the strength into the "bud" which is to become the future tree.

FIG. 2.

The difference between root-grafts and budded stock will be apparent to anyone. The graft has a root only one year old; it is usually taken from a smaller and weaker seedling, and has *only a piece of root after all*. But the bud is inserted in a *selected* seedling either one or two years old, the entire root being retained; and as the bud is dormant the first year, the root gains another season's growth so that before the stem of the future tree begins to grow the root is two or three years old, firmly established, and prepared to throw the bud up into a straight growth of four or five feet the first season, so that it can be "headed;" *namely*, the top cut off about three and one-half to four and one-half feet from the ground, so that it can throw out branches the second year and make a "head," instead of spindling up into a mere whip.

The root of the budded stock has a big start and keeps it, so that when called upon to support the bud, it pushes it right along, and at the end of two or three years you have a perfect, smooth, symmetrical tree, with a fine strong root. It is not our aim to

furnish a tree with a big stem, but with many roots. In buying trees you are not buying them for the amount of cord wood they will make. We *start the tree* for you, but *you must develop it;* with budded trees you have roots furnished which will enable you to do it.

FIG. 3.

Not only do we exercise the greatest care in propagating and growing our trees, but we even import the greater part of our seedlings. All our pear and quince seedlings, and a great part of our apple, cherry and plum seedlings, we get from France. Our apple seedlings which are raised here, are raised from French crab seeds, so that from the very seeds up to the perfect tree nothing is omitted which will help to produce a tough, hardy tree. The advantage in using the French seedlings is that they are almost entirely free from blight. The same care is exercised in growing our plums and cherries, as in growing our apples. Our cherries are budded on pure Mazzard and Mahaleb stock, and our plums on *plum seedlings*, not on peach seedlings, as is the practice with those whose only thought is to get trees into market *quick*.

We believe the above will sufficiently explain why our prices are above those dealers and small growers who go about hawking their inferior trees. If the difference in the quality of the tree grown by these men and those grown by scientific nurserymen is taken into account, the planter would not be long in determining that the difference in cost between the two would but ill compensate him for wasting time and land on this cheap class of stock. Budded stock is not only longer lived, but it bears earlier and heavier crops than root grafted stock. Apples, Pears, Plums, Quinces, Cherries and Apricots, are shipped at the age of two to four years *from the bud*.

Peaches.—In the mountains of Virginia, Tennessee and North Carolina, there is a wild variety of peach. The fruit is of little value, but the trees are of strong constitution, free from disease and long lived. For raising our seedlings we obtain the pits from this "natural" fruit, and plant them in nursery rows. This insures a perfectly healthy seedling to start with. These seedlings are large enough to "bud" by August. The buds are selected from perfectly healthy young trees of the variety desired.

With these precautions we are enabled to guarantee a healthy peach tree, so far as it is within human power to do it. The disease known as the "yellows" may arise from careless cultivation, from contagion, and *from using either seeds or buds* affected with the disease. We carefully avoid danger from all these sources, and we do not hesitate to guarantee every peach we ship to be in a healthy condition and free from disease. The cheap trees offered by some growers are raised from pits taken from canning factories, and of course obtained from cultivated varieties, wholly incapable of producing a strong heathy seed. All peach trees are shipped when "one year old," that is, one year from the bud.

HOW TO CARE FOR NURSERY STOCK WHEN RECEIVED.

Soak the trees with water, and either place them in a cellar and keep wet, or bury them in a trench, until the holes are ready for transplanting. If at all dry and shriveled, the best plan is to bury them root and branch in wet earth. If frozen, they should be buried in earth until the frost is removed.

Planting.—The broken or multilated portions of the roots must be cut off, so as to leave the ends smooth and sound, and the ends of all the other roots should be pruned. From these ends the new fibrous roots usually start. The soil should be in as good condition as for a crop of corn. When planting upon the lawn or grass plots remove the sod to a diameter of four or five feet and keep this space well worked and free from weeds. Dig the hole deeper and larger than is necessary to admit all the roots in their natural position, keeping the surface and subsoil separate. Cut off broken and bruised roots and *shorten the tops to half a dozen good buds*, except for fall planting, when it is better to defer top pruning until the following spring. Work the best soil thoroughly among the roots and pack it hard about them. Severe pruning of the head of the newly set tree is absolutely necessary to made it correspond with the supply of new shoots that the shortened roots can give. See that they are all entirely free from any coarse manure, but in all parts packed in fine earth. Fill up the top of the hole with loose soil, so that the tree will stand about as in the nursery. *Dwarf Pears*, however, should be so set that the joint between the quince stock and the pear should be covered at least three inches. A covering of coarse manure, straw, marsh hay or loose

chip dirt during the first season will effectually prevent injury from drouth and is a benefit at all times. If trees are tall and much exposed to winds, a stake should be driven beside the tree, to which it should be tied in such a manner as to avoid chafing. Afterwards keep the ground worked and free from weeds, till the trees bear at least.

"Heeling in" stock received in the fall.—The practice of procuring supplies of trees in the fall is becoming more and more general as each season demonstrates its wisdom. It is a more favorable time than spring, because the stock has just entered into dormant condition and is in no danger of starting to grow while in transit. In most sections all hardy varieties may be planted in the fall. Peaches, however, at the north, will not bear fall planting. Even when fall *planting* is not desirable by reason of severity of the climate, the stock may be *procured* in the fall, and thus be on hand ready for the opportune moment in the spring. To insure success you have only to get the trees before freezing weather, and bury them in the following manner: choose a dry spot where no water will stand during the winter, with no grass near it to invite mice. Dig a trench, throwing out enough dirt to admit one layer of roots below the surface, and place the trees in it, inclined at an angle of forty-five degrees or more. Widen the trench, throwing the soil among the roots in position, place another layer in the trench, reclining the tops on the others, and so on until all are in the trench; then finish by throwing up more soil until the tips of the trees are nearly or quite covered. It is also well to bank up the earth around the sides to insure more thorough protection. The exposed tops should then be covered with pine boughs, which insures them against any possibility of injury. Care should be taken to fill solid all the interstices among the roots. *Too much care in doing this cannot be insisted upon, as every root which is not in close contact with the soil is sure to be killed.* In the spring the trees will be on hand for transplanting at the earliest moment possible to do the work.

Pruning.—All fruit trees require more or less pruning from year to year. While the tree is young the head should be formed, and unnecessary branches be taken out so that they will leave small scars which will quickly heal over. The best time to prune is late in the winter or in early spring, when no more severe weather is anticipated, and when the trees will soon begin the healing process.

DISTANCES FOR PLANTING.

Standard Apples	30 to 40 feet apart each way.
Standard Pears and strong growing Cherries	20 feet apart each way.
Duke and Morello Cherries	18 " " "
Standard Plums, Apricots, Peaches,	16 to 18 " "
Dwarf Pears and Quinces	10 to 12 " "
Grapes	rows 8 to 9 feet apart 7 to 9 feet in rows.
Currants and Gooseberries	3 to 4 feet apart.
Raspberries and Blackberries	3 to 4 by 5 to 7 apart.

NOTE.—A most excellent way in planting an apple orchard 40 feet apart is to plant peaches or small fruits between. By the time the apples require the ground the others will have passed their prime and can be removed.

NUMBER OF TREES ON AN ACRE.

40 feet apart each way			27	10 feet apart each way			435
30	"	"	50	8	"	"	680
25	"	"	70	6	"	"	1210
20	"	"	110	5	"	"	1742
18	"	"	135	4	"	"	2722
15	"	"	200	3	"	"	4840
12	"	"	302				

RULE.—Multiply the distance in feet between the rows by the distance the plants are apart in the rows and the product will be the number of square feet for each plant or hill; which divided into the number of feet in an acre (43,560), will give the number of plants or trees to the acre.

SPRAYING.

The calendar shown on the following page was prepared by Prof. E. G. Lodeman, of Cornell University Agricultural Experiment Station. The most important points regarding sprays have been selected and arranged in such a manner that the grower can see at a glance what to apply and when to make the applications. The more important insect and fungous enemies are also mentioned, so that a fairly clear understanding of the work can be obtained by examining the accompanying table. When making the applications advised, other enemies than those mentioned are also kept under control, for only the most serious ones could be named in so brief an outline. The directions given have been carefully compiled from the latest results obtained by leading horticulturists and entomologists, and they may be followed with safety.

NOTICE.—In this calendar it will be seen that some applications are italicised and these are the ones which are *most important*. The number of applications given in each case has particular reference to localities in which fungous and insect enemies are most abundant. If your crops are not troubled, when some applications are advised, it is unnecessary to make any. It should be remembered that in all cases success is dependent upon the exercise of proper judgment in making applications. Know the enemy to be destroyed; know the remedies that are most effective; and finally, apply them at the proper season. Be *prompt*, *thorough* and *persistent*. Knowledge and good judgement are more necessary to success than any definite rules which can be laid down.

FORMULAS.

Bordeaux Mixture. Copper sulphate, 6 pounds; quicklime, 4 pounds; water, 40 gallons. Dissolve the copper sulphate by putting it in a bag of coarse cloth and hanging this in a vessel holding at least 4 gallons, so that it is just covered by the water. Use an earthen or *wooden vessel*. Slake the lime in an equal amount of water. Then mix the two and add enough water to make 40 gallons. It is then ready for immediate use. If the mixture is to be used on peach foliage it is advisable to add an extra pound of lime to the above formula. When applied to such plants as carnations or cabbages it will adhere better if about a pound of hard soap be dissolved in hot water and added to the mixture. For rots, moulds, mildews, and all fungous diseases.

Ammoniacal Copper Carbonate. Copper carbonate, 1 ounce; amonia (1 volume 26° Beaumé, 7-8 volume of water), enough to dissolve the copper; water, 9 gallons. The copper carbonate is best dissolved in large bottles, where it will keep indefinitely, and it should be diluted with water as required. For the same purposes as Bordeaux mixture.

Copper Sulphate Solution. Copper sulphate, 1 pound; water, 15 gallons. Dissolve the copper sulphate in the water, when it is ready for use. *This should never be applied to foliage, but must be used before the buds break.* For peaches and nectarines use 25 gallons of water. For fungous diseases.

Paris Green. Paris green, 1 pound; water, 200–300 gallons. If this mixture is to be used upon peach trees, 1 pound of quicklime should be added. Repeated applications will injure most foliage, unless lime is added. *Paris green and Bordeaux mixture can be applied together with perfect safety.* Use at the rate of four ounces of the arsenites to 50 gallons of the mixture. The action of neither is weakened, and the Paris green loses all caustic properties. For insects which chew.

London Purple. This is used in the same proportion as Paris green, but as it is more caustic it should be applied with two or three times its weight of lime, or with the Bordeaux mixture. The composition of London purple is exceedingly variable, and unless good reasons exist for supposing that it contains as much arsenic as Paris green, use the latter poison. Do not use London purple on peach or plum trees unless considerable lime is added. For insects which chew.

Hellebore. Fresh white hellebore, 1 ounce; water, 3 gallons. Apply when thoroughly mixed. This poison is not so energetic as the arsenites and may be used a short time before the sprayed portions mature. For insects which chew.

Kerosene Emulsion. Hard soap, ½ pound; boiling water, 1 gallon; kerosene, 2 gallons. Dissolve the soap in the water, add the kerosene, and churn with a pump for 5–10 minutes. Dilute 10 to 25 times before applying. Use strong emulsion for all scale insects. For insects which suck, as plant lice, mealy bugs, red spider, thrips, bark-lice or scale. Cabbage worms, currant worms and all insects which have soft bodies, can also be successfully treated.

SPRAY CALENDAR.

PLANT.	First Application.	Second Application.	Third Application.	Fourth Application.	Fifth Application.	Sixth Application.
APPLE . . . . . (*Scab, codlin moth, bud moth.*)	When buds are swelling, copper sulphate solution.	*Just before blossoms open, Bordeaux. For bud moth, Arsenites when leaf buds open.*	*When blossoms have fallen, Bordeaux and Arsenites.*	*8-12 days later, Bordeaux and Arsenites.*	10-14 days later, Bordeaux.	10-14 days later, Bordeaux.
CHERRY . . . . . (*Rot, aphis, slug.*)	As buds are breaking, Bordeaux; when aphis appears, Kerosene emulsion.	When fruit has set, Bordeaux. If slugs appear, dust leaves with air-slaked lime. Hellebore.	10-14 days if rot appears, Bordeaux.	10-14 days later, Ammoniacal copper carbonate.		
CURRANT . . . . . (*Mildew, worms.*)	*At first sign of worms, Arsenites.*	10 days later, hellebore. *If leaves mildew, Bordeaux.*	If worms persist, Hellebore.			
GOOSEBERRY . . . . . (*Mildew, worms.*)	*When leaves expand, Bordeaux.* For worms as above.	*10-14 days later, Bordeaux.* For worms as above.	*10-14 days later, Ammoniacal copper carbonate.* For worms as above.	*10-14 days later, repeat third.*		
GRAPE . . . . . (*Fungous diseases, Flea-beetle.*)	In Spring when buds swell, copper sulphate solution. *Paris green for flea beetle.*	*When leaves are 1-1½ inches in diameter, Bordeaux. Paris green for larvæ of flea beetle.*	*When flowers have fallen, Bordeaux. Paris green as before.*	*10-14 days later, Bordeaux.*	10-14 days later, if any disease appears, Bordeaux.	10-14 days, Ammoniacal copper carbonate. Make later applications of this if necessary.
PEACH, NECTARINE, APRICOT . . . . . (*Rot, mildew.*)	*Before buds swell, copper sulphate solution.*	Before flowers open, Bordeaux.	*When fruit has set, Bordeaux.*	*When fruit is nearly grown, Ammoniacal copper carbonate.*	*5-10 days later, repeat fourth.*	5-10 days later repeat fourth if necessary.
PEAR . . . . . (*Leaf blight, scab, psylla, codlin moth.*)	As buds are swelling, copper sulphate solution.	*Just before blossoms open, Bordeaux. Kerosene emulsion when leaves open, for psylla.*	*After blossoms have fallen, Bordeaux and Arsenites. Kerosene emulsion if necessary.*	*8-12 days later, repeat third.*	10-14 days later, Bordeaux. Kerosene emulsion applied forcibly for psylla.	10-14 days later, repeat if necessary.
PLUM . . . . . (*Fungous diseases, curculio.*)	*During first warm days of early spring, Bordeaux for black knot. When leaves are off in the fall, Kerosene emulsion for plum scale.*	*When buds are swelling, Bordeaux for black knot and other fungous diseases.* During mid-winter, Kerosene emulsion for plum scale.	*When blossoms have fallen, Bordeaux. Begin to jar trees for curculio. Before buds start in spring, Kerosene emulsion for plum scale.*	*10-14 days later, Bordeaux. Jar trees for curculio every 2-4 days.* For San José scale, Kerosene emulsion when young appear in spring and summer.	*10-20 days later, Bordeaux for black knot. Jar trees for curculio.* When young plum scale insects first appear in summer, Kerosene emulsion.	*10-20 days later, Bordeaux for black knot. Later applications may be necessary to prevent leaf spot and fruit rot, use Ammoniacal copper carbonate.*
QUINCE . . . . . (*Leaf and fruit spot.*)	When blossom buds appear, Bordeaux.	When fruit has set, Bordeaux and Arsenites.	10-20 days later, Bordeaux.	*10-20 days later, Bordeaux.*	*10-20 days later, Bordeaux.*	
RASPBERRY . . . BLACKBERRY . . . DEWBERRY. . . (*Anthracnose, rust.*)	Before buds break, copper sulphate solution. Cut out badly diseased canes.	During summer, if rust appears on leaves, Bordeaux.	Repeat second if necessary.	(*Orange or red rust is treated best by destroying entirely the affected plants.*		
ROSE . . . . . (*Mildew, black spot, red spider, aphis.*)	For mildew. *Keep heating pipes painted with equal parts lime and sulphur mixed with water to form a thin paste.*	For black spot. *Spray plants once a week with Ammoniacal copper carbonate, using fine spray.*	For red spider. *Spray plants twice a week with Kerosene emulsion. Apply to under side of foliage.*	For aphis. *Spray affected parts with Kerosene emulsion when necessary.*		(Kerosene emulsion must be used very dilute, as rose foliage is easily injured by it.)

FRUIT DEPARTMENT.

APPLES.

No other fruit occupies, in the north temperate zone, the commanding position of the apple. Its period of use extends nearly or quite through the year. Whether it be in size, form, or color; in flavor, sweet or sour, in infinite variety of shades; in crispness or tenderness, it will in some variety or other suit any taste.

No ordinary farm crop will on the average produce one-fourth as much income per acre as a good apple orchard. The fact that six to eight years must elapse before a newly planted orchard will begin to bear deters many from planting. But as a matter of fact the land can be used a large part of the time for crops, and no great investment is required to plant at the rate of 30 to 50 trees to the acre. When once in bearing, with little actual time spent upon it each year, it will be an unfailing source of cash income, if properly selected from varieties recommended in our list.

Let no one be disappointed, if he misses from our list some names familiar to his childhood, varieties which the glamour of years and the voracious appetite of youth causes to stand out in memory so delightfully. That memory is often a delusion. We still propagate only those varieties which, having stood the test of time, are at this day holding their own with the best. Some old varieties, after being eclipsed for years by fungous diseases which made them well nigh worthless, are now again made worth growing by the victory of science over those diseases.

Many varieties of apples are known by different names in different sections, and are sometimes called for by names not known outside of particular localities. Fameuse, for instance, is called Snow by some people, and Fallawater, Tulpehocken.

Order nothing that you do not find in our list. If you wish some variety whose name you know locally, not given here, select the kind which has the same description, and you will make no mistake.

Ironclads.—This term is applied nowadays to a class of trees that are extra hardy. Most of them are of Russian origin, adapted by their tough leatherly leaves and hardy constitution, to withstand the extremities of the most severe climate. They will stand long, hot, dry summers, and extremely cold winters. Their parentage comes from lines long developed in the severe climate of the Russian plains. They are exceedingly fruitful, very early bearers, some of them, indeed, beginning to bear in the nursery row.

Codling Moth.—This lays in the calyx end of the apple, the egg which produces the apple worm. To prevent see page 8.

Apple Scab.—Some varieties, like Newtown Pippin and Fall Pippin, are especially subject to this, which frequently destroys the crop. Spray with Bordeaux mixture. See Spray Calendar page 8.

Distances for planting.—*Vigorous* growing varieties in strong soil forty feet apart. *Moderate* growing varieties 30 feet apart. *Size when ready for shipment* five to seven feet; two to four years old from the bud.

SUMMER APPLES.

Caroline Red June—Small or medium; deep red; flesh very white, tender, juicy, with a brisk, sub-acid flavor; very good. Tree very *vigorous*, upright, an early and abundant bearer. August.

Early Harvest—Medium to large; roundish; pale yellow; flesh white, tender, juicy, crisp, with a rich sub-acid flavor; fine. Tree *moderate* grower, erect; very productive. Middle to end of August.

Early Strawberry—Medium; roundish, narrowing towards the eye; finely striped and stained with deep red; flesh white, slightly tinged with red next the skin, tender, sub-acid, very sprightly and brisk in flavor, with an agreeable aroma. Tree a *moderate*, erect grower, and a good bearer. Middle to end of August

Golden Sweet—Large; pale yellow; very sweet and good; vigorous; good bearer. August and September.

Keswick Codlin—Large, oblong, pale yellow; pleasant acid; quality fair. Tree erect and very *vigorous;* bears when quite young, and abundantly; excellent for cooking. July to October.

Primate—Medium ; pale yellow with a blush on the sunny side; tender, juicy, and sub-acid ; quality the best. Tree, hardy, stocky, *moderate* grower, very productive. August and September.

Red Astrachan—Large ; roundish : nearly covered with deep crimson, overspread with a thick bloom ; very handsome ; juicy, good, rather acid. Tree of the hardiest, *vigorous*, and a good bearer. August.

Sops of Wine—Medium size, oblong ; dark crimson, flesh stained with red ; juicy, sub-acid. Tree a *free* grower, distinct and quite productive. August and September.

Sweet Bough (Large Yellow Bough)—Large ; pale yellow ; very tender, crisp, juicy. sweet, fine. Tree a moderate grower, bears abundantly. August.

Tetofsky—An extremely beautiful Russian apple. Medium, with a yellow skin, handsomely striped with red and covered with a whitish bloom ; flesh juicy, sprightly, acid, aromatic. Tree of rather dwarfish habit, stocky ; annual, abundant and exceedingly early bearer. Hardy as a crab. Usually begins to bear the second year after transplanting. One of the most profitable trees to plant for market. Should be in every fruit garden. Ironclad. August.

Williams' Favorite—Large, oblong, red ; rich and excellent ; a *moderate* grower and good bearer. Very highly esteemed in Massachusetts, especially around Boston, where it originated. A handsome dessert apple. August.

Yellow Transparent—A Russian apple. The tree is hardy as the crab, a good upright grower ; a very abundant, regular and early bearer ; the fruit full medium size ; color a rich transparent lemon yellow, with a faint flush on sunny side ; flesh melting, juicy, pleasant, sub-acid. Ten days earlier than the Early Harvest and is the earliest ripening apple known.

AUTUMN APPLES.

Autumn Strawberry—Medium, roundish or inclining to an oval shape ; striped and splashed with red; flesh whitish, tender and juicy, of a pleasant and agreeable flavor; bears young and abundantly, and is annually loaded with crops of fine fruit. September.

Alexander (Princess Louise)—A Russian apple. Large ; deep red or crimson ; flesh yellowish white, crisp, tender, with pleasant flavor. Tree a *moderate* grower. Very hardy, one of the Ironclads. September and October.

Colvert—Of large size, striped ; tender, very juicy and strictly No. 1 quality ; tree a handsome, fine grower, and a good, regular and abundant bearer. Oct. and Nov.

Chenango Strawberry (Sherwood's Favorite)—Large, oblong, red and yellow ; flesh white, tender, juicy, good. Tree *vigorous*, and very productive. Sept. and Oct.

Duchess of Oldenburg—A Russian apple. Large, yellow, streaked with red, and somewhat blushed ; flesh, juicy and good, sub-acid. Tree a *vigorous* grower, and a young and abundant bearer. One of the Ironclads, so hardy that it succeeds where most of the other varieties fail. August and September.

Fall Jennetting—Large, oblate ; pale greenish white, with a blush ; tender, juicy, mild and sub-acid. Tree vigorous, spreading and productive. November.

Fall Pippin—Very large, roundish, oblong ; yellow ; flesh tender, rich and delicious. Tree *vigorous*, spreading and a fine bearer. Admirable for baking. October to December.

Gravenstein—Large, roundish ; yellow and striped with red, handsome ; tender, juicy and high flavored. Tree *vigorous* and erect, very productive. Sept. and Oct.

Haas—Large, flat, ribbed or quartered; yellowish green, steaked and nearly covered with dull, brownish red ; flesh white, tender, juicy, sub-acid, good. Tree an *extremely vigorous* grower, hardy, one of the Ironclads. An early and abundant bearer. October and November.

Jersey Sweet—Medium ; striped red and green ; tender, juicy and sweet ; tree *vigorous* and a good bearer. September and October.

Maiden's Blush—Large, flat, smooth regular ; with a fine, evenly shaded, red cheek or blush on a pale yellow ground ; flesh white, tender, sprightly, with a pleasant sub-acid flavor ; tree erect, *vigorous*, and a regular and abundant bearer. September and October.

Munson's Sweet—Medium to large; pale yellow, with a red cheek; tender, rich and good; tree *vigorous* and a good bearer. October and November.

Porter—Rather large; yellow; tender, rich and fine. Moderate grower, but productive. September.

Pumpkin Sweet (Pound Sweet)—Very large; roundish; skin smooth, pale green, becoming yellow next to the sun; flesh white, very sweet, rich, tender. Very valuable for baking. Tree *vigorous*, great bearer. September, December

Rambo—Medium; yellowish, streaked and mottled with dull red and somewhat dotted; tender, juicy and mild flavored; tree *vigorous* and a good bearer. September in the south. October to January in the north.

Red Bietigheimer—A rare and valuable German variety. Fruit large to very large; roundish, inclining to conical; skin pale, cream colored ground, mostly covered with purplish crimson; flesh white, firm, sub-acid, with a brisk, pleasant flavor. Tree a *vigorous* grower and abundant bearer. This is one of the largest and handsomest varieties, and worthy of extensive cultivation. September.

St. Lawrence—Large, roundish; striped dark red on greenish yellow; rather acid, moderately rich and agreeable; handsome and productive variety. October.

Stump—Medium; conical; skin yellow, striped and shaded with light red, resembles Chenango Strawberry; flesh firm, crisp, juicy, tender, sprightly, sub-acid. Tree *moderate*, handsome, of stocky growth, *very prolific*. One of the very best table apples. The fruit, from its uniform size, fine appearance, and mild, pleasant flavor, commands ready sale at the highest price. *A decided acquisition* to the list of profitable market and good garden sorts. September and October.

Twenty Ounce—Very large; nearly round; yellow, striped with red; of fair quality; tree a *vigorous*, spreading grower, and a fine bearer. Excellent for baking. Very popular in the markets. October to January.

WINTER APPLES.

Bailey's Sweet—Large, roundish, conical, mottled and striped with deep red; flesh yellow and tender, with a mild, rich, sweet flavor. Moderate grower. November to March.

Baldwin—Large, roundish; skin deep bright red, flesh juicy, crisp, sub-acid; good flavor; tree very *vigorous* upright, and productive; one of the most popular and profitable winter varieties. December to March.

Baxter—Originated in Canada. Fruit uniformly large. handsome, delicious, mild acid. Tree extremely hardy, vigorous and productive. December to May.

Belle de Boskoop—Large; bright yellow, washed with light red on sunny side, and sometimes with a sprinkling of russet; flesh crisp, firm, juicy, sprightly, sub-acid; core small and close; quality very good; a late keeper; tree a *vigorous* grower. A new sort of Russian origin, one of the latest keepers among them; extremely hardy, one of the Ironclads; bears early and abundantly. February and April.

Ben Davis—Large, handsome, striped, and of fair quality; tender, juicy, mild, sub-acid. Tree very hardy, a *vigorous* grower, constant and abundant bearer; highly esteemed as one of the most profitable market sorts. Dec. to March.

Bismarck—Introduced from New Zealand. Very large, remarkably handsome and showy; color red on yellow ground; flesh yellow; quality good; extremely hardy and prolific and bears very early. Promises to be valuable for market. November to February.

Blenheim Pippin—Fruit large; very uniform and handsome, with crimson blush on sunny side. Brisk, sub-acid flavor. Tree a remarkable, healthy, vigorous grower in nursery and orchard. A very heavy bearer. A valuable market apple.

Boiken—When fully ripe resembles Maiden's Blush in color; rosy red and bright yellow. Is scab proof, requiring no spraying to produce fine fruit; foliage so healthy as to resist attacks of fungi. Keeps well into June.

Bottle Greening—Fruit medium size; greenish yellow, shaded with dull crimson in the sun; excellent; resembles Rhode Island Greening, but tree a better grower and much hardier. A native of Vermont. January to February.

Cooper's Market—A popular New Jersey apple. Medium size, fair quality; valuable on account of its great productiveness, long keeping qualities and handsome appearance. January to May.

BISMARCK.

Fallawater (Tulpehocken, Pound, etc.)—Very large, round, yellowish green with dull red cheeks; juicy, crisp, pleasant, peculiar sub-acid flavor; tree a *vigorous* grower, very productive even while young. Nov. to Mar.

Fameuse (Snow apple)—Medium, roundish; deep crimson. Very handsome; flesh snowy white, tender, melting, juicy, high flavored, sub-acid, delicious. Tree *moderate* grower, very hardy and productive. Nov. to Jan.

Gano—Originated in Missouri. Form conical, good size and smooth; deep red shaded on sunny side to mahogany very attractive; flesh pale yellow, fine grained, tender pleasant, mild, sub-acid; is a good shipper and keeper; tree healthy, vigorous and hardy. An annual and prolific bearer. February to May.

Gideon—Hardy as a crab apple, vigorous, early and prolific bearer. Medium to large; rich golden yellow; flesh fine, juicy, sub-acid. Good keeper, February.

Golden Russet—Medium, roundish, ovate, dull russet, with a tinge of red on the sunny side; flesh greenish, crisp, juicy and high flavored; tree vigorous, very hardy, a good bearer. November to April.

Grimes' Golden—Medium to large; cylindrical; golden yellow, sprinkled with gray dots; flesh crisp, tender, juicy, sprightly; very good to best. Tree hardy, *vigorous*, productive, bears early. January to April.

Hurlbut—Medium size, conical; yellow, shaded with red, striped and splashed with darker red; flesh white, crisp and tender, juicy, mild sub-acid; quality excellent; begins to bear while young and continues with regular and constant crops; very hardy and suited to the extreme North. October to December.

Hubbardston Nonsuch (American Blush)—Large, round; beautiful yellow, striped and splashed with red; flesh tender, juicy and fine, with agreeable rich flavor hard to distinguish between sweetness and acidity; tree *vigorous;* bears large crops. November to January.

Jonathan—Medium size; red and yellow; flesh tender, juicy and rich; a *moderate* grower; shoots light-colored, slender and spreading; very productive. One of the best varieties either for table or market. November to March.

King (Tompkins County)—Largest size; oblate, yellowish ground striped and covered with bright red; fragrant, spicy smelling; flesh very crisp, tender, rich, fine flavor,

sub-acid; vigorous, productive in certain localities; hardy. A superb apple. November to April.

Lawver—Large, dark red, covered with small dots; flesh firm, white, crisp, sprightly, aromatic, mild, sub-acid. A beautiful and desirable fruit. January to May.

Lady—A beautiful little dessert fruit, flat, pale yellow, with a brilliant red cheek; flesh crisp, juicy and pleasant; tree a *moderate* grower, forming a dense, erect head bearing large crops of fruit in clusters. The fruit brings the highest price in the city markets. December to May.

Longfield—A new Russian variety. Medium to large, conical; yellowish green, thickly covered with red stripes and a decided blush on the sunny side; flesh white, fine, tender and juicy with a rich, sprightly sub-acid flavor; tree a vigorous grower, extremely hardy, one of the Ironclads, and an early and abundant bearer. November to January.

Mann—Originated in Niagara County, N. Y. Medium to large, roundish, oblate; deep yellow, often with a shade of brownish red where exposed; flesh yellowish, juicy, mild, pleasant, sub-acid. Tree hardy, an upright, *vigorous* grower. Fruit keeps firm till late in the spring, and matures after Greening is gone. Very valuable as a cooking and eating apple for spring use. January to May.

McIntosh Red—Large, roundish, skin mostly covered with bright red or crimson, almost purplish in the sun; flesh white, fine, very tender, juicy, mild, sub-acid; Tree *vigorous*, extremely hardy and long lived. Good annual bearer. Very desirable. November to February.

Milding—Fruit large; smooth skin, whitish yellow, splashed with bright, rich red nearly over the whole surface; flesh brittle, tender, juicy, sprightly sub-acid, aromatic; tree a strong, vigorous, upright grower. One of the very hardiest in cultivation, and exceedingly productive. December to February.

Mother—Large, red; flesh very tender, rich and aromatic. Tree a *moderate* grower and good bearer. Succeeds well in the North. *One of the best dessert apples.* November to January.

Newtown Pippin (Albemarle Pippin)—Medium to large, roundish, yellow; very firm, crisp, juicy, with a highly delicious sub-acid flavor; tree a very slow, feeble grower, and not adapted to Western New York and New England; must be top grafted, highly fertilized and well cared for. Has attained its greatest perfection on Long Island and in the Hudson Valley. One of the most famous American apples. A very late keeper. November to June.

Northern Spy—Large, roundish, slightly conical, somewhat ribbed; quite covered on the sunny side with dark crimson, and having a pale bloom; flesh white, tender, juicy, spicy, high flavored and delicious, sub-acid; retaining freshness of appearance and flavor until June. The tree is a remarkably vigorous, erect grower, and a great bearer. Requires thinning of the head to admit light and air freely to the fruit. Both leaf and blossom buds open a week later than other varieties. January to June.

Northwestern Greening—New, originated in Waupaca County, Wis. Fruit medium to large, averaging from seven to eight ounces each and very uniform in size. Color greenish yellow, flesh juicy, firm and fine grained, very fine quality and flavor. Tree is *very hardy* and a thrifty grower, an early and continuous bearer; one of the longest keepers known; with proper care can be kept throughout the entire year. January to June.

North Star—The North Star apple since its introduction has had a large sale, altogether on its merits as an *American Ironclad*. It is a seedling of Duchess of Oldenburg, but of better quality. Originating in Maine, is a guarantee of its hardiness. We consider it an all-around, first-class apple, which is bound to become a standard variety in the future.

Ontario—Originated in Canada. Said to be a seedling from the Wagener and Northern Spy. Tree moderately vigorous with spreading head and very hardy; foliage large dark green; fruit large, roundish, somewhat ribbed, stripped on the sunny side with beautiful red; quality fine, crisp and juicy, and a good keeper. An annual and abundant bearer. December to April.

Opalescent—New. All who have examined the Opalescent regard it as the handsomest apple grown. It is not only highly colored but susceptible of a very high polish, reflecting objects near it like a mirror. This feature makes it a highly prized sort for fruit stands. The flesh is yellowish, tender, juicy and good, size large to very large and color light shading to very dark crimson. Season Dec. to March.

Paragon—(Mammoth Black Twig). The fruit resembles Winesap, but is larger and superior in flavor, and a better keeper ; color bright red, texture fine. Tree a strong grower, bears early and abundantly, holding its load well. Dec. to May.

Peck's Pleasant—Large, pale yellow, with brown cheek ; very smooth and fair ; flesh firm, fine grained, juicy, crisp, aromatic, with the flavor of Newtown Pippin. A good keeper. Tree *moderate* grower, erect, a good bearer. November to April.

Pewaukee—A seedling from Duchess of Oldenburg. Medium to large, roundish, oblate ; skin bright yellow, striped and splashed with dark red, and overspread with whitish dots ; flesh white, tender, juicy, sub-acid ; tree *vigorous*, extremely hardy, especially for cold and severe climates, one of the Ironclads. January to May.

Rambo—Medium size ; streaked and mottled yellow and red ; very tender, juicy, sprightly and fine flavored ; tree *vigorous* and good bearer. Fall apple in the south. October to January in the north.

Rawle's Janet—Medium, roundish, ovate ; yellow, striped with red ; crisp, rich and juicy ; *vigorous ;* a prolific bearer ; one of the best and latest keepers for Maryland and the south. February to May.

Red Canada (Steele's Red Winter)—Medium, oblate ; red ; flesh rich, sub-acid and delicious ; tree a *moderate* and slender grower. A superior fruit for table or market. November to May.

Rhode Island Greening—Large, roundish ; green or greenish yellow ; tender, juicy and rich, rather acid, but high flavored and one of the best for cooking and dessert ; tree vigorous, spreading, very crooked grower in the nursery ; a great and constant bearer nearly everywhere. Toward the south ripens in the fall, but in the north a late keeper. December to April.

Rolfe—Originated in Maine. By many called coreless on account of its small core, usually having but one seed each. The tree is hardy, a vigorous grower and said to be an annual bearer. The handsome appearance of this fruit makes it a valuable market sort. In quality we should rank it as first-class. The flesh is slightly yellow, crisp, juicy, slightly sub-acid ; splendid for cooking and good for eating. Season, November to February.

Rome Beauty—Large ; yellow and bright red ; flesh yellowish, tender, juicy, sub-acid ; tree *moderate* grower, good bearer. December to March.

Roxbury Russet—Medium to large ; greenish or yellow russet ; surface rough ; crisp, good sub-acid flavor ; tree vigorous, productive. Its great popularity is due to its productiveness and long keeping. January to May.

Salome—Fruit of medium and uniform size ; quality very good, which it retains even into summer ; claimed to have been kept in excellent condition until October. Tree a strong grower ; equals Wealthy in hardiness ; holds its fruit firmly, even against strong wind storms; an early and annual bearer, although a heavier crop on alternate years. February to June.

Senator—(Oliver). Fruit medium to large, roundish ; bright red on a greenish yellow ground ; distinctly dotted. Flesh yellowish white, juicy, rich, pleasant, sub-acid, with an intense apple flavor. Small core. Tree a vigorous, symmetrical grower ; an early and heavy bearer. Season mid-winter.

Seek-no-Further—(Westfield). Above medium ; dull red, dotted with russet ; flesh white, fine grained ; rich flavor, excellent. December to February.

Smith's Cider—Large ; handsome, red and yellow ; juicy, acid ; quality medium. Moderate grower, and good bearer ; succeeds well in south and west, not so well here. November to February.

Spitzenburgh (Esopus)—Medium to large ; deep red ; flesh yellow, crisp, sub-acid, with a spicy and delicious flavor ; tree rather slow grower, requires top working, high culture and good care, under which it forms a large spreading tree, a good bearer and deservedly a most popular variety. December to April.

Stark—Large, roundish ; greenish yellow, shaded, sprinkled and striped with light and dark red nearly over the whole surface, and thickly sprinkled with light brown dots ; flesh yellowish, moderately juicy, mild, sub-acid ; tree *vigorous*, an early and abundant bearer, hardy ; the fruit a long keeper and valuable market fruit. January to May.

Sutton Beauty—Medium to large, roundish ; handsome, waxen yellow, shaded mottled, and obscurely striped with fine crimson ; flesh whitish, crisp, tender, juicy, sprightly sub-acid ; quality fine ; late keeper ; tree a *vigorous*, handsome grower and productive. One of the most valuable market varieties. November to February.

Swaar—Large ; pale yellow, with dark dots ; tender, with a mild, rich, agreeable flavor ; tree a *moderate* grower. With good culture, one of the best of apples. November to May.

Talman Sweet—Medium size ; pale yellow, slightly tinged with red ; firm, rich and sweet ; excellent for cooking ; tree vigorous, very hardy and productive. November to April.

Wagener—Medium to large ; light yellow covered with deep red in the sun, firm, crisp, juicy, sub-acid ; tree *vigorous*, upright, handsome very productive ; December to May.

Walbridge—Medium size ; handsome, pale yellow, striped with red ; crisp, tender, juicy, a late keeper ; tree very *vigorous*, extremely hardy, one of the Ironclads. January to May.

Walker's Beauty—New. Originated in Allegany County, Pa. Tree a strong upright grower ; one of the best in the nursery. Fruit very large ; color crimson on yellow ground ; flesh firm, sub-acid. Season January to June.

Wealthy—Medium, roundish ; skin smooth, oily, whitish yellow, mostly covered with dark red ; flesh white, fine, juicy, vinous, sub-acid, very good, one of the best and finest apples grown ; tree *vigorous*, extremely hardy, one of the Ironclads a very early and abundant bearer. Deserves the widest cultivation. November to February.

Yellow Bellflower—Large ; yellow with a blush in the sun ; very tender, juicy, sub-acid ; a beautiful and excellent apple ; in use all winter ; tree *vigorous* and a good bearer. November to April.

Winter Banana—New, excellent. The name is most appropriate, as it has a delightful banana perfume. Fruit keeps well till spring ; the color is a striking red blush on a deep yellow ground. It is of large size and very showy in appearance, roundish, inclining to conical, stalks three-fourth of an inch long, cavity moderate, apex shallow. Originated in Indiana.

Wine Sap—Large, roundish ; deep red ; medium quality ; keeps well ; tree a fair grower and good bearer. December to May.

York Imperial—Medium ; white shaded with crimson ; flesh firm, crisp, juicy, pleasant, mild, sub-acid ; tree *vigorous*, a good bearer. A *popular Pennsylvania* variety. November to February.

Wolfe River—Very large ; beautiful red in the sun on a yellow ground ; strong grower and a good bearer. Original tree in Wisconsin is 30 years old ; very healthy and extremely hardy. December to February.

Special List No. 1—Extra Hardy apples adapted to severe climates ; sure bearers.

Alexander,	Longfield,	Stark,
Belle de Boskoop,	Mann,	Tetofsky,
Boiken,	McIntosh,	Walbridge,
Duchess of Oldenburgh,	Pewaukee,	Wealthy,
Fameuse,	Red Astrachan,	Wolf River,
Grimes' Golden,	Red Bietigheimer,	Yellow Transparent.
Haas,		

Special List No. 2—Adapted to the south for late keepers. Many northern winter apples are fall apples at the south.

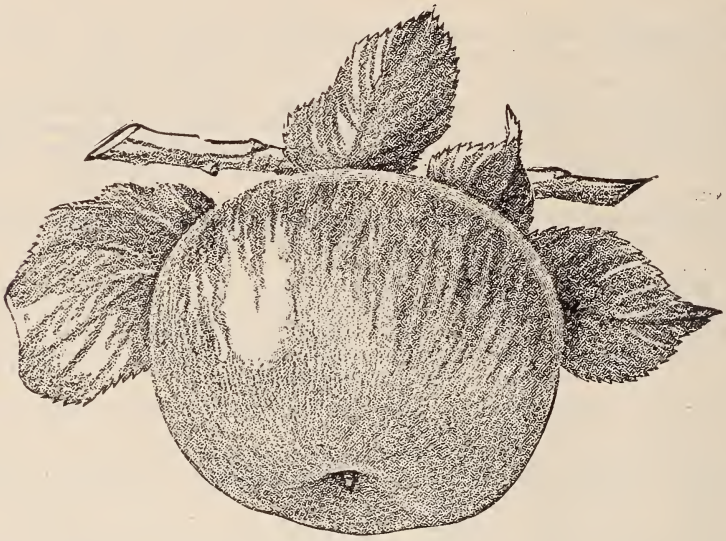
Ben Davis,	Rawle's Janet,	Winesap,
Fallawater,	Smith's Cider,	York Imperial.

CRAB APPLES.

All our cultivated sorts of apples came originally from a species of crab which is found wild in most parts of Europe. There are several kinds of wild crab native to this country, but our fine cultivated varieties do not arise from these. Certain fine varieties of crab apples are exceedingly valuable for the making of jelly and cider or vinegar. Other varieties are not suited to culinary purposes at all, but on account of their beautiful appearance, delicate texture and delicious flavor, are highly prized as dessert fruit.

They are extremely hardy, have all the vigor of the original apple tree, and can be planted in any kind of soil in the most exposed situation with perfect safety. They come into bearing very early, bear regularly and abundantly. The size of the fruit varies from 1½ to 2½ inches in diameter.

One familiar with only the small Siberian crabs can have but a faint conception of the size, beauty and excellence of the new and improved varieties which have been introduced in recent years.



TRANSCENDANT.

Bailey's Crimson—Fruit large, roundish ; skin yellow, shaded over the whole surface with deep rich crimson, covered with a light bloom ; flesh yellow, juicy, sub-acid. Tree vigorous, upright, very productive. September.

Excelsior—A new variety raised from seed of the Wealthy, and in quality equals that apple. Tree as hardy as any of the crabs. Vigorous. September and October.

Gen'l Grant—Fruit large, round, red to very dark red ; flesh white, tender, mild subacid ; excellent for dessert, and one of the best crabs introduced. Tree a vigorous and upright grower. October.

Hyslop—Almost as large as Early Strawberry Apple ; deep crimson ; very popular on account of its large size, beauty and hardiness. Vigorous. October to January.

Martha—A new variety ; a seedling of the Duchess of Oldenburg. Resembles the Transcendant, but larger ; a beautiful showy fruit and bears enormously. All things considered, we doubt if it has an equal among the crabs. Vigorous. Sept. and Oct.

Red Siberian—Fruit small, about an inch in diameter ; yellow with scarlet cheek, beautiful. Tree an erect, *free* grower ; bears when two or three years old. September and October.

Transcendant—Skin yellow, striped with red ; flesh crisp and juicy. An early and heavy bearer. One of the best known varieties. Vigorous. Sept. and Oct.

Van Wyck Sweet—An exceedingly valuable variety. Fruit very large; skin yellowish white, colored light red, and covered with bloom; flesh yellowish white; very sweet and tender; small core. Vigorous. October and November.

Whitney's Seedling (No. 20)—Large, glossy green, striped, splashed with carmine; flesh firm, juicy and flavor very pleasant; ripe latter part of August. Tree a great bearer and very hardy; a vigorous, handsome grower, with a dark green, glossy foliage. Vigorous. August.

Yellow Siberian (GOLDEN BEAUTY)—Large, and of a beautiful golden yellow color. Tree *vigorous*. September.

PEARS.

This fruit may now be had in varieties, which will be in good eating condition from August until early spring. It is a very profitable fruit to grow and will especially reward good cultivation and care.

They should be gathered from ten days to two weeks before they are fully ripe, when, on gently lifting the fruit, the stem will readily separate from the limb. Only the most perfect specimens should be marketed to insure the highest price, and they should be handled and packed with care to avoid bruising. They should be kept in a dark place until fully matured. Winter pears may hang on the trees until there is danger of frost, and then placed in a dry cellar to mature.

The pear succeeds on most soils, but does best on a rather heavy loam. Budded on its own stock it makes what is called a *standard* tree; but on quince stock it makes a *dwarf*. Standards are best adapted to large, permanent orchards; but dwarfs will come into bearing very much sooner and may be planted much closer together. *Dwarfs must always be planted sufficiently deep to cover the quince stock two or three inches.*

The soil should be rich and well cultivated. A pear orchard should not be permitted to "go to grass." They should be pruned every year, dwarfs especially. Dwarfs should have low heads and be trained in pyramidal form, one half of the previous season's growth being cut off each spring.

Size when shipped, Standards 5 to 7 feet high; Dwarfs 3½ to 4½ feet. Plant Standards 20 feet apart and Dwarfs 12 feet apart.

SUMMER.

Bartlett—Large size, with often a beautiful blush next the sun; buttery, very juicy and high flavored; bears early and abundantly; very popular. Vigorous. Aug. and Sept.

Clapp's Favorite—Very large; yellowish green to full yellow when ripe, marbled with dull red in the sun, and covered with small russet specks; vinous, melting and rich. Should be gathered early. Vigorous. August.

Doyenne d'Ete—Scarcely Medium size; yellowish, with a fine blush; juicy, sugary and rich; very early. Vigorous. August.

Koonce—Medium to large, pyriform, very handsome; yellow, one side covered with bright carmine, sprinkled with brown dots; flesh juicy, sweet, spicy, good. Ripens with the earliest. Tree a remarkably strong grower, hardy, and very productive. August.

Manning's Elizabeth—Small to medium; bears in clusters; crimson and gold color; very beautiful, melting, rich, sugary, sprightly, perfumed flavor; excellent; very productive. One of the best early pears. Vigorous. August.

Osband's Summer—Medium, yellow with red cheek; half melting, mild and pleasant; fine flavor and excellent; productive. Free grower. August.

Souvenir du Congres—Fruit large to very large, resembling in form the Bartlett; skin smooth, of a handsome yellow at maturity, washed with red or carmine on the side exposed to the sun. Flesh much like the Bartlett, having the musky flavor, though in a less degree. September.

Tyson—Medium size, bright yellow; cheek shaded with redish brown, buttery, very melting; flavor nearly sweet, aromatic, excellent. Vigorous. August.

Wilder's Early—Medium, or rather small, regular in form; greenish yellow with a brownish red cheek; handsome, melting, sweet, pleasant, very good; tree a vigorous grower and great bearer. First of August.

AUTUMN.

Belle Lucrative—Large ; melting and sweet ; a fine upright grower, and bears early and abundantly. September and October.

Beurre Bosc—A large, fine pear ; russety yellow, slight brownish red in the sun ; flesh white, melting, juicy, sweet, perfumed ; productive. Should be top worked. Moderate. September and October.

Beurre Clairgeau—Large ; skin yellow, inclined to fawn, shaded with orange and crimson, covered with russet dots ; flesh yellow, buttery, juicy, somewhat granular, with a sugary, perfumed, vinous flavor. Moderate. October to December.

Beurre d'Anjou—Large, greenish, sprinkled with russet, sometimes shaded with dull crimson ; flesh whitish, buttery, melting, with a high, rich, vinous, excellent flavor ; very productive ; succeeds well on the quince ; should be in every orchard. Vigorous. October to December.

Buffum—Medium ; obovate ; deep yellow, shaded red, somewhat russeted ; sweet, buttery, good. Erect grower, very productive. Valuable for fair fruit and regular bearing. Mid-autumn.

Duchesse d'Angouleme—Very large, dull greenish yellow, streaked and spotted with russet ; flesh white, buttery and very juicy with a rich and very excellent flavor. Vigorous. October and November.

Flemish Beauty—Large, beautiful, juicy, melting, rich and fine ; good bearer ; hardy everywhere. Vigorous. September and October.

Garber—One of the Japan Hybrids ; earlier and larger than Keiffer ; hardy, productive, early bearer. September and October.

Howell—Large, light, waxen yellow, with fine red cheek ; handsome, rich, sweet, melting, perfumed aromatic flavor. An early and profuse bearer. Very hardy and valuable. Vigorous. September and October.

Idaho—Originated in Idaho. Very large, nearly round ; yellow, with brownish red on sunny side ; flesh melting, juicy, vinous. Hardy, vigorous and prolific. September and October.

Kieffer—Very large, bell shaped ; light yellow, when fully ripe, sometimes with a slight blush ; flesh white, crisp, juicy, of slightly quince flavor ; of fair quality ; exceedingly valuable for cooking or canning, which brings out its best spicy flavor ; never rots at the core. The tree is an extraordinarily vigorous grower, and must be severely pruned. It is a wonderfully abundant and regular bearer, and the fruit must be thinned for the best results. Extremely vigorous. October to December.

Le Conte—Resembles the Bartlett in fruit and time of ripening. Very profitable in the south. September.

Louis Bonne de Jersey—Rather large ; greenish yellow, with a bright red cheek ; juicy, buttery and melting ; excellent ; very productive. Vigorous. September to October.

Onondaga (Swan's Orange)—A large, melting, sprightly, vinous pear. Tree vigorous, hardy and extremely productive. October and November.

Rutter—Originated in Pennsylvania ; quality fine ; flavor high, sugary, juicy and vinous ; size large ; ripens in November.

Seckel—Small ; skin rich yellowish brown with a deep brownish red cheek ; flesh very fine grained, sweet, exceedingly juicy, melting, buttery ; the richest and highest flavored pear known. Moderate. September and October.

Sheldon—Large size ; yellow or greenish russet, with a richly shaded cheek ; flesh a little coarse, melting, juicy, a very brisk, vinous, highly perfumed flavor ; productive. Vigorous. October.

Vermont Beauty—A beautiful new seedling pear from Grand Isle, Lake Champlain. Fruit of medium size, roundish, skin yellow, nearly covered with carmine. Tree healthy, hardy, and very productive. Vigorous. October.

Worden Seckel—A seedling of Seckel. Fruit medium size, borne in clusters, juicy, buttery, fine-grained, with a flavor and aroma fully equal to that of its parent, which it surpasses in size, beauty, and keeping qualities. Ripens in October, but will keep in good condition till December.

WINTER.

Dana's Hovey—Small, but of fine quality and keeps well. The tree has much of the habit of the Seckel, and is a moderate grower.

Dorset—A very handsome and showy late-keeping pear. Large, golden yellow ground, with bright red on sunny side; flesh juicy, melting, sweet, of good quality. Keeps and ships well and is a valuable late pear. Ripe in February, but keeps in perfection till May. Tree a vigorous grower.

Duchess de Bordeaux—Large size, with very thick, tough skin, which renders it a valuable keeper for winter use; flesh melting, juicy, rich. Keeps till March.

Lawrence—Rather large; yellow, covered with brown dots; flesh whitish, slightly granular, somewhat buttery, with a very rich, aromatic flavor, unsurpassed among the early winter pears; succeeds well on the quince; ripens with little care; should be in every orchard; tree healthy, hardy and productive. Free grower. November to January.

Lincoln Coreless—Among the many new pears offered to the public, there is none but this which possesses the wonderful quality of being practically coreless. In season it is late, and the fruit is picked when green, and laid away to ripen. It will keep for several months. Specimens have been known to keep until March in an ordinary cellar. Fruit large, quality very good, rich, luscious and juicy, and pronounced excellent by all who taste it. When ripe, the skin is of a rich golden tint, and the flesh is yellow. Tree a strong, healthy grower. They are hardy, enduring the same climate that Bartlett will.

Mt. Vernon—Medium; light russet; reddish in the sun; flesh yellowish, juicy and aromatic; tree an early bearer; excellent late pear. December to January.

Winter Nellis—Medium size; yellowish green and russet; fine grained, melting, rich and delicious; one of the best winter pears; very productive, should be top worked. Moderate. December.

DWARF PEARS.

As certain varieties of Pears are not successful when grown as Dwarfs, we herewith give a special list of such as are most suitable, and of which the *Duchesse d' Angouleme is decidedly the* BEST OF ALL.

Beurre Clairgeau,	*Duchesse d' Angouleme*,	*Louise Bonne*,
Beurre d' Anjou,	Howell,	Lawrence,
Clapp's Favorite,	Kieffer's Hybrid,	Seckel,

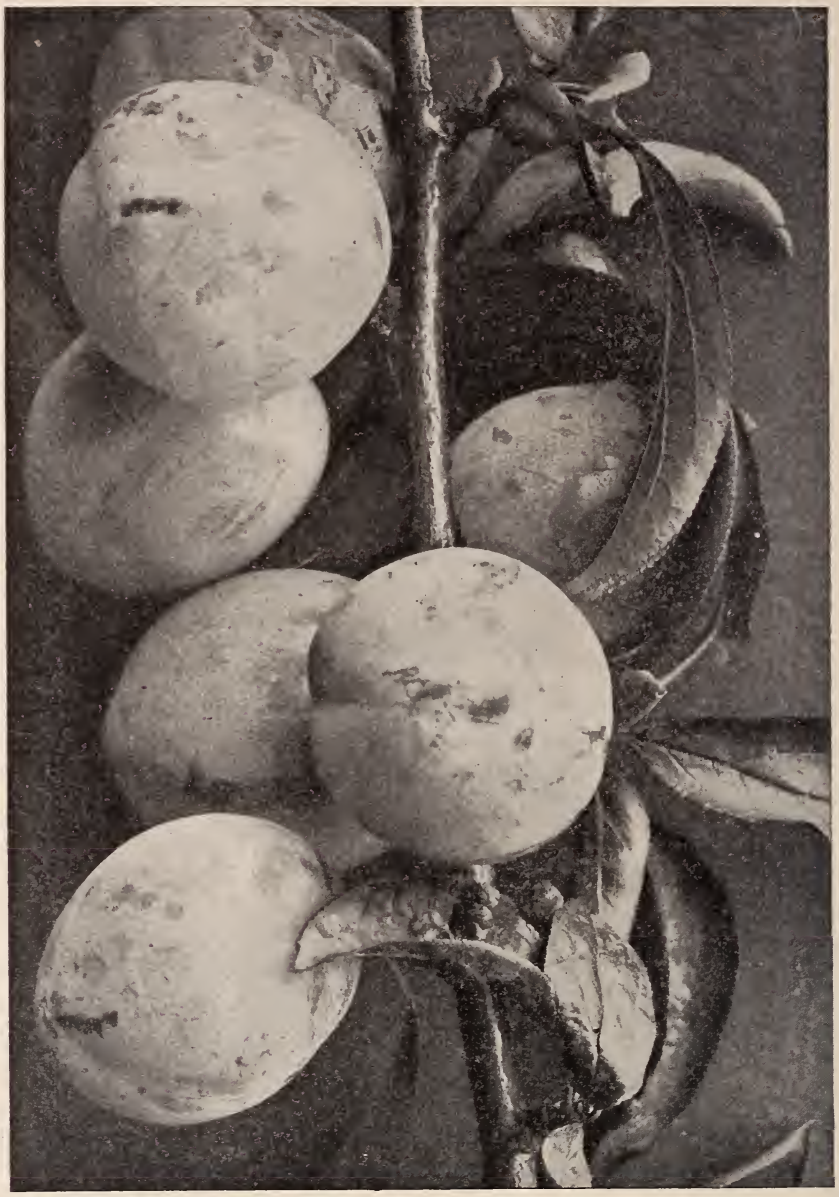
PLUMS.

Most of the cultivated varieties of plums are European or descendants of European varieties. But in recent years certain extraordinarily good varieties of native plums have been widely disseminated; and very recently we have received some extremely valuable varieties from Japan. Crosses from all these will from time to time bring out new and much improved varieties, especially securing plums of the best quality of the European plums united with the hardiness, or desirable season, or good shipping qualities of the others.

The finer kinds of plums are beautiful dessert fruits, of rich and luscious flavor. For cooking and canning they are unsurpassed. For best flavor they should be allowed to remain on the tree until fully ripe; but for shipping to market, they must be gathered a very few days earlier, when they may be shipped long distances, arriving in good condition. Overbearing should not be allowed; but when the trees are over full, sometimes one-half should be removed, the remaining fruit thus having a chance to come to the finest perfection and bringing a much higher price than if all had remained on the tree.

Some varieties, especially of the native plums, are extremely hardy and will stand the climate of the extreme northwest. Such are noted in our list as extra hardy, while all in the list are hardy and vigorous in all but the most severe climates.

Plums should be pruned sufficiently to prevent a straggling growth, and to keep the



THE BURBANK.

head from being too crowded. "Black Knot" must be removed as soon as it is discovered. The only remedy is to cut off the diseased part and burn it. Permit no black knot to exist about your premises or your neighbor's, if you can help it, but have it removed and burned.

The plum does best in heavy loam; but it will do extremely well on a shaley or gravelly loam, especially if there be some clay in the soil. They should be thoroughly cultivated and not allowed to stand in grass.

The curculio is a small, dark brown beetle, scarcely one-fifth of an inch long, which bites the fruit, leaving a semi-circular scar, where it has deposited its egg. They may be easily prevented from taking too large a share of the fruit, by faithful *jarring* of the trees, mornings, after the fruit has set till the fruit is half grown. Catch the curculios in a sheet and destroy them. All plums that drop should be gathered and burned, to destroy eggs and larvæ.

Plant 16 to 18 feet apart. Size, when ready to ship four to six feet, two to four years old.

Abundance (Botan) — One of the best Japan plums. The tree is a very rapid grower, healthy in limb and foliage, comes into bearing remarkably young, and yields abundantly. The fruit is full medium size, color a rich, bright cherry red, with a distinct bloom, and highly perfumed; flesh light yellow, very juicy and tender, and of excellent quality. Vigorous. Last of July.

Apricot Plum (Prunus Simoni)—In all respects a botanical curiosity. In color of bark, and in all points except the net veinings and color of leaves, it resembles the peach. The fruit in appearance comes nearer a flattish, smooth, brick red tomato than any of our stone fruit, yet in smell and flavor it approaches very near the nectarine. It is a native of Northern China, comes into bearing very young and adds a new type to fruit collections, a type without a representative among our fruit trees. While we place it with our plums, it should be classed by itself. Vigorous. August.

Arch Duke—A large plum, ripening late.

Bradshaw—Fruit very large, dark violet red; flesh yellowish green; juicy and pleasant; very productive. One of the most profitable for market. Comes at a good season, of fine appearance and brings a good price. Vigorous. Middle of August.

Burbank—A valuable Japanese plum, of deeper color and ripening later in the season than the Abundance. The fruit is large, nearly globular, clear cherry red with a thin lilac bloom: flesh a deep yellow, very sweet, with a peculiar and very agreeable flavor. The tree is a vigorous grower, with large and broad leaves; usually begins to bear second year after transplanting. August.

Chabot—Very large; pointed, tapering gradually from a heart-shaped base; color bright red purple, on a yellow ground; very showy. Tree a good grower, blooms two weeks later than Abundance, thus escaping the spring frosts, and a most abundant bearer. Ripens a little later than Burbank. One of the best Japans.

Coe's Golden Drop—Large and handsome; light yellow; firm, rich, sweet; one of the best late plums. One of the best for family use.

De Soto—Very hardy, extremely productive: medium size, bright red, good quality. September.

Empire—Large, oval, dark purple, fine quality; good shipper and keeper. Tree vigorous, hardy and productive. Early September.

Field—Tree an upright strong grower, early and abundant bearer. Fruit large, oval, reddish, resembles Bradshaw, ten days earlier. August.

French Damson—This plum has much to commend it. Tree a much better grower than the Shropshire or Blue Damson. Very hardy, and an annual bearer; very productive. Fruit medium; dark copper color, with a rich bloom, and the *best* Damson for market purposes we have fruited; ripens two weeks later than Shropshire. Moderate. October.

Grand Duke (New)—A valuable addition to late plums; as large as the Bradshaw, of same color, and ripening latter part of September. Entirely free from rot. One of the best plums for market.

General Hand—Very large, oval; golden yellow, juicy, sweet and good. Vigorous. A poor bearer. First of September.

German Prune—A large, long, oval variety, much esteemed for drying; color dark purple; of very agreeable flavor. Vigorous. September.

Giant Prune—One of Burbank's new creations; of largest size; color deep, dark purple; flesh yellow, and of remarkable sweetness; excellent shipper. The tree is a strong, handsome grower, producing fruit of uniform size; productive.

Green Gage—Small; well liked where grown; tree a slow grower. About middle of August.

Geuii—Fruit very large, deep bluish purple, covered with thick bloom; flesh yellowish green, coarse, sweet and pleasant; great bearer and very early; tree a hardy and rapid grower. One of the most profitable for market. Vigorous. First to middle of September.

Hale—A large, handsome Japanese plum; bright orange, mottled with cherry red; flesh yellow, quality good.

Hawkeye—Large, color light mottled red, superior quality, firm; carries well to market. Tree hardy, thrifty; annual bearer. September.

Imperial Gage—Fruit large, oval, skin pale green, flesh juicy, sweet, rich and excellent. Vigorous. Middle of August.

Italian Prune—Good size, purple, juicy, delicious, fine for drying. September.

Lombard (Bleecker's Scarlet)—Medium, roundish oval; violet red; juicy, pleasant and good; adheres to the stone; productive. A valuable market variety; one of the most hardy and popular. Nearly always produces a crop. Not liable to rot. Vigorous. Middle of August.

Monarch—Very large, roundish oval; dark purplish blue, freestone, of excellent quality; an abundant bearer.

Moore's Arctic—Fruit grows in large clusters; large, dark purple; flavor very fine both for preserving and dessert. A long keeper. Vigorous. September.

Niagara—Very large; reddish purple, entirely covered with gray bloom; flesh deep greenish yellow. By some said to be identical with Bradshaw. Vigorous. Middle of August.

Ogon—Large, nearly round, bright golden yellow, with faint bloom; flesh firm, sweet, rich and dry. Tree vigorous and hardy. First of August.

Pond's Seedling—A magnificent English Plum; light red, changing to violet; flesh rather coarse; abundant bearer. One of the most attractive in cultivation. Vigorous. September.

Purple Egg (Hudson River Purple Egg)—Highly esteemed by growers along the Hudson River; described as one of the richest and finest flavored Plums we have; stone free; good size; resembles the German Prune—a little larger—with a nice bloom; good bearer and brings a good price in market; tree bears young. One of the most profitable for market. Vigorous. September.

Quackenboss—Large, oblong, oval; deep purple; a little coarse, sprightly, juicy, sweet and excellent. Adheres slightly to the stone; productive. Valuable for market. Vigorous. October.

Red Egg (Red Magnum Bonum)—Large; red; firm flesh; sub-acid. First of Sept.

Red June—An early ripening Japanese plum; medium to large, roundish, conical, purplish red, handsome; flesh yellow, quality good.

Reine Claude de Bavay—Large, nearly round; pale yellow, marked with red; juicy, melting and excellent; good bearer. Not liable to rot. One of the most profitable for market. Vigorous. First of September.

Satsuma—A fine, large Japanese plum. The flesh is solid, of a purplish crimson color from pit to skin, juicy, and of fine quality. Pit exceedingly small, very little larger than a cherry stone. Vigorous. September.

Shipper's Pride—Fruit large; color dark purple, handsome and showy; flesh firm, of excellent quality; very productive and a valuable market variety. Free. Sept.

Shropshire Damson—A plum of fine quality, as free from the attacks of the curculio as the Common Damson, and of same color. The flesh is amber colored, juicy and sprightly. Very productive, and a valuable market variety. Not liable to rot. Free. September.

Smith Prune (Kingston or Diamond)—Large, blue, late; good market sort. Tree good grower, very productive. One of the best. September.

Stanton—The Stanton is a chance seedling that had its origin in Albany County, N.Y. Fruit roundish oval, medium to large, quite regular; color deep blueish purple covered with a rich bloom; flesh yellow, firm, rich and sugary, and parts freely from the stone. Vigorous. October.

Smith's Orleans—A large and good kind. Oval, reddish purple; flesh firm, juicy and good; fine flavor. August and September.

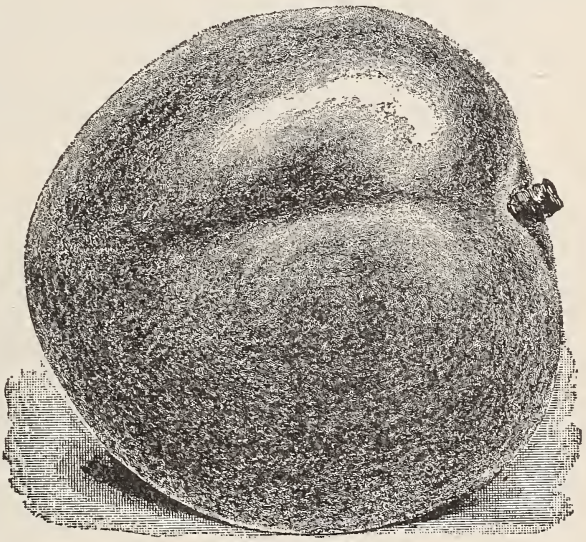
Turkish Prune—Large, beautiful blue color; flesh solid; freestone; quality extra; good bearer, hardy and prolific; the best prune in cultivation, Free. September.

Tennant Prune—Originated in Whatcom Co., Washington, where it has been tested for twenty years, and has never failed to produce a good crop of fruit. Large dark purple with a blue bloom. Flavor of the highest quality—rich, sugary and delicious. Tree hardy and very productive. Bears transportation well, and is considered by all who have seen it to be the best drying prune in cultivation.

Union Purple—Fruit large, roundish oval; skin reddish purple covered with a thin bloom; stalk short and stout; flesh greenish, vinous, sweet; adheres to the stone. Vigorous. September.

Washington — Very large; clear yellow, marked with red; flesh firm, very juicy and excellent; very popular; productive. Free. Last of August.

Weaver—Purplish red, with a blue bloom; very prolific; a constant and regular bearer and of good quality. The tree is very hardy, not being injured in the severest winters and will thrive even to the northern limits of the United States. American. Vigorous. August.



THE WICKSON.

Wickson (a new Japanese Plum; a cross between Kelsey and Burbank)—The tree grows in vase form, sturdy and upright, yet as gracefully branching as could be desired, and is productive almost to a fault. The fruit is evenly distributed all over the tree, and from the time it is half grown until a few days before ripening is of a pearly white color, but all at once soft pink shadings creep over it, and in a few days it has changed to a glowing carmine with a heavy white bloom; the stone is small and the flesh is of fine texture, firm, sugary and delicious, and will keep two weeks or more after ripening, or can be picked when hard and white and will color and ripen almost as well as if left on the tree. Ripens about September 1st.

Wild Goose—Fruit medium; color a beautiful bright red; flesh juicy and sweet. American. Vigorous. First of August.

Wolf—Fruit nearly as large as the Lombard and a perfect freestone. As to quality we find them superb for cooking and serving with sugar as we use peaches. Tree a good grower, hardy, and is becoming very popular wherever known. August.

Yellow Egg (Yellow Magnum Bonum)—Very large, egg-shaped; excellent for cooking; good and productive. Vigorous. Last of August.

RECENT INTRODUCTIONS.

Apple.—Named because of its close resemblance to an apple in general appearance. form, color and rare keeping qualities. Fruit averages about 2½ inches in diameter, striped and mottled until nearly ripe when it turns to a deep reddish purple. The superlatively rich, high flavored, sweet or sub-acid, flesh is rather firm, pale red; marbled pink, nearly freestone. Ripens soon after Burbank; sometimes keeps over a month in good condition. Tree is a fine strong grower, with peculiar light brown bark. Very productive.

America.—From seed of the native plum, "Robinson," crossed with the Japan plum, "Botan," combining the quality and size of the Japanese with the hardiness of our native. Tree a good grower and very prolific. Fruit larger than the average Japan and four to sixteen times as large as the popular native sorts. It is not surpassed in beauty by any plum; color glossy coral red, flesh light yellow, moderately firm, of excellent quality, ripens two to three weeks before Robinson or Burbank, is a splendid keeper. Should prove hardy all over the United States and succeed wherever plums can be grown.

Chalco—The result of twelve years' experiments in crossing Prunus Simoni (Apricot Plum) with Japan and American varieties, it is the forerunner of a new hardy race of plums. Tree a tremendous grower and unsurpassed in productiveness, hardy, it must supplant P. Simoni and will prove profitable in most sections where that variety is a failure. Fruit ripens just before Burbank; large, flat, deep reddish purple; flesh yellow, very sweet, rather firm, exceedingly fragrant, seed small. Like the Apricot Plum the fruit is almost stemless and completely surrounds the older branches. A superior shipping sort, ripening well when picked green and keeps nearly a month.

CHERRIES.

The Cherry thrives best on a dry, sandy or gravelly soil, and there attains its highest perfection, but will do well in almost any situation except a wet one.

We divide them into two classes: (1) Hearts and Bigarreaus; (2) Dukes and Morellos. The former are strong and vigorous growers, making large, open, spreading heads, their fruit is large, heart shaped, meaty and sweet. The Dukes and Morellos do not attain so large size, but are more hardy and less liable to injury from bursting the bark; their fruit is usually sour.

For dry soils we rate the cherry, and particularly the Morello class, one of the most profitable fruits grown. The Hearts and Bigarreaus are profitable for home market, but for shipping, the Dukes and Morellos carry the best and yield the largest returns. Ordinary well grown trees produce from five bushels per tree upwards, and the fruit brings one year with another two to three dollars per bushel.

Plant 16 to 18 feet apart. Size when ready to ship, Heart and Bigarreau, four to six feet; Dukes and Morellos three and one-half to six feet.

HEART AND BIGARREAU CHERRIES.

Black Eagle—Large, black, tender, rich, juicy and high flavored. Tree a moderate grower and productive. Ripens beginning of July.

Black Tartarian—Very large, bright purplish black; half tender, juicy, very rich, excellent flavor; productive. Free. First to middle of July.

Coe's Transparent—Medium; pale amber; red and mottled next the sun; tender, sweet and fine; tree vigorous and erect. Last of June.

Downer's Late Red—Rather large; light red, tender and juicy; slightly bitter before fully ripe. Tree a vigorous, erect grower and productive. One of the best late cherries.

Early Purple Guigne—One of the very earliest sweet cherries. Nearly black when fully ripe; tender, juicy, delicious; tree slender and spreading, productive and remarkably hardy. Middle of June.

Elton—Large, pointed; pale yellow, nearly covered with light red; half tender, juicy, rich and delicious; tree vigorous, spreading and irregular. End of June.

Florence—Resembles Napoleon Bigarreau, but ripens a little later and hangs a long time on the tree. Color yellow with a reddish cheek; flesh firm, rich, sweet, fine flavor. Hardy and good bearer. Middle of July.

Gov. Wood—One of the best cherries; very large; light yellow marbled with red; juicy, rich and delicious. Tree healthy and a great bearer. Hangs well on the tree. Vigorous. Last of June.

Knight's Early Black—Large, black, tender, juicy, rich and excellent; productive. Free. Middle to last of June.

Napoleon Bigarreau—Very large, pale yellow or red; very firm, juicy and sweet; very productive; one of the best. Vigorous. First of July.

Rockport Bigarreau—Large; pale amber with clear red; a very excellent and handsome cherry; good bearer. Vigorous. First of July.

Schmidt's Bigarreau—Remarkably hardy and productive. Fruit grows in clusters and of the largest size; a deep black color; flesh dark, tender, juicy, with a fine rich flavor. Vigorous. July.

White Caroon—Fruit of large size; flavor sub-acid. The beautiful appearance and rich flavor of this cherry make it the choicest of all for canning. Vigorous. Middle to last of July.

Windsor—Fruit large; liver colored, resembling the Elkhorn, ripening a few days after that variety; flesh remarkably firm, of fine quality. Tree hardy and prolific. Vigorous. Middle of July.

Yellow Spanish—Large, pale yellow, with red cheek; firm, juicy and excellent; one of the best light colored cherries; productive. Free. Last of June.

DUKE AND MORELLO CHERRIES.

Baldwin—Tree an upright, vigorous grower forming a round head; leaves large and broad; bloom pure white, changing to pink; fruit large, almost round, very dark transparent wine color; flavor slightly acid, yet the sweetest and richest of the Morello type; stems rather large of medium length, and generally in pairs. Unexcelled in earliness, vigor, hardiness, quality and productiveness. Out of 800 trees it readily attracted attention as being the most thrifty and beautiful. When the original tree was eight years old it had fruited five years and was then one-third larger than any Early Richmond tree of the same age.

Belle Magnifique—Fruit large, roundish; skin bright red; flesh tender, juicy, sprightly, sub-acid; one of the finest of this class of cherries. Tree hardy and very productive. Free. Last of July.

Dikeman—Sweet, dark. The latest dark colored cherry of medium size. Origin Michigan. Not inclined to decay, and keeps in perfect condition long after being picked. Its firm flesh and fine keeping qualities especially commend it as an orchard fruit.

Dyehouse—A very early and sure bearer; ripens a week before Early Richmond. June.

Early Richmond—Medium size; dark red; melting, juicy, sprightly, acid flavor. This is one of the most valuable and popular of the acid cherries, is unsurpassed for cooking purposes, and is exceedingly productive. Free. June.

Empress Eugenie—A French cherry of the Duke family; large, roundish, flattened; rich dark red; flesh reddish, tender, rich, juicy, sub-acid; very good; stone small; tree rather dwarf in habit, shoots pretty stout, very productive. First of July.

English Morello—Medium to large; blackish red; rich, acid, juicy and good; very productive. Moderate. August.

Late Duke—Large, light red; late and fine. Moderate. Last of July.

Louis Phillippe—Very productive; fruit large, roundish, regular; color rich dark, almost purplish black red; flesh red, tender, sprightly; mild, acid; good to best. Free. Middle of July.

Lutovka—Sour, red, middle to last of July. Fruit large. Color rich dark red. Flesh red, tender, juicy, with a mild sub-acid flavor. Extra hardy; a vigorous grower and very productive.

May Duke—Large, dark red, juicy and rich; an old, excellent variety; productive. Free. Middle of June.

Mercer—New; originated in New Jersey. Fruit large, dark red, fine flavored, sweet. A good shipper; tree very hardy and healthy; is an annual bearer and not liable to being wormy nor rot on the tree, and gives great promise of being one of the very best for orchard or family purposes. Early.

Montmorency (Ordinare)—A large, red, acid cherry, larger than Early Richmond, and fully ten days later. Very profitable. Early Richmond hangs in clusters and is more liable to rot. Free. Last of June.

Olivet—A new variety of French origin. Large, globular, very shining, deep red sort; flesh red, tender and rich; vigorous; very sweet, sub-acid flavor. Free. Middle to last of June.

Ostheime—A Russian cherry of recent introduction; very hardy; color dark red; flesh very dark, juicy, with a pleasant sub-acid flavor. Free. Middle of July.

Reine Hortense—Very fine; large, bright red; juicy, delicious and productive.

MONTMORENCY.

Wragg—Supposed to hail from North Germany; very hardy. The tree is a good grower and an immense bearer; fruit a dark liver color, juicy and rich. Quite late and a valuable cherry.

ROCKY MOUNTAIN CHERRY.

Improved Dwarf—From Colorado, where it has been under cultivation for some time and received the highest endorsements from the leading horticulturists and fruit growers of that State. As hardy as a Wyoming sage brush, it has withstood a temperature of 40° below zero, unharmed in either fruit-bud or branch. Exceedingly productive. Fruit jet black when ripe, and in size averaging somewhat larger than the English Morello, its season of ripening being after all others are gone. In flavor it is akin to the sweet cherries. Worthy of cultivation for an ornamental shrub.

PEACHES.

The peach tree requires a well drained, moderately rich soil; warm, sandy loam is probably the best.

In order to preserve the continued healthy growth of the tree and the fine quality of the fruit, the peach should have the shoots and branches cut back to one-half the preceding season's growth every year, so as to preserve a round, vigorous head; this should be done the last of February, or as early in the spring as practicable. The land should not be seeded to grass, but kept in constant cultivation.

The following varieties have been selected out of hundreds, the best only being chosen. They furnish a succession for about two months, commencing the early part of August. Extremely early peaches do not have a sufficient season to mature. But from early in August, the varieties named below are all luscious, beautiful fruit.

The trees are all shipped with a one-year top and two-year root. The size will vary greatly according to the season and variety. Plant 16 to 18 feet apart.

Admiral Dewey—Introduced by J. D. Husted, the well known originator, amongst other varieties, of Husted's Early, Early Michigan and Triumph Peaches. He has devoted many years to scientific crossing and breeding for improved varieties. Every new kind introduced by him has stood the test of practical trial, and maintained all the merits claimed for them. His latest introduction "Admiral Dewey," marks a great advance in early Peaches. It is a perfect freestone; flesh yellow, of uniform color and texture to the pit. Hardy and productive. Tree a strong symmetrical grower, and as near perfection as we can obtain in a single variety.

Alexander—Medium, greenish white, nearly covered with rich red; melting, juicy, sweet. July.

Amsden—An early peach, of medium size; white, fine flesh, juicy and melting. Middle to last of July. Slightly cling.

Barnard's Early—Medium to large; yellow, cheek purplish red; flesh yellow, red at the stone, juicy, sweet and rich. One of the very best yellow fleshed peaches. Freestone. Said to be nearly the same as Yellow Honest John and Yellow Alberge. First to middle of September.

Beer's Smock—A very large, yellow peach; few days later than Smock's free; valuable for market.

Bokara—Raised from seed procured from Bokara, Asia, a number of seedlings being produced that proved 30 per cent. hardier than the old strain of peach trees. One of the seedlings proved decidedly the best: it has been fruited in Iowa several years and found the hardiest and best peach known there. Is highly recommended by prominent horticulturists, including Prof. Budd and Silas Wilson. Tree has stood 28 degrees below zero with but little injury to tips, and produced fair crops after 21 below. Fruit large, yellow, with red cheek, of good quality, perfect freestone; skin tough; a fine shipper. August.

Carman—Large, resembles Elberta in shape; color, creamy white or pale yellow with deep blush; skin very tough, flesh tender, fine flavor and quite juicy. Ripens with early Rivers. One of the hardiest in bud; in shipping qualities and freedom from rot it is unsurpassed. Promises to stand at the head for a general, long distance, profitable, market variety, in quality ranking superior to anything ripening at same time. August.

Champion—Extremely good for an early peach a perfect freestone, which is a rare thing among early peaches; very hardy, regular bearer. First of August.

Conkling—Large and handsome; golden yellow, marbled with crimson; flesh pale yellow, very juicy, sweet, vinous, and very good. Tree *vigorous*, and yields heavy crops; succeeds Crawford's Early.

Cooledge's Favorite—Large, white with crimson cheek; flesh pale, very melting and juicy, with a rich, sweet and high flavor; beautiful and excellent. Hardy, productive. Freestone. Middle to last of August.

Crawford's Early—This very beautiful and best of yellow peaches is highly esteemed for market purposes. Fruit very large, oblong; skin yellow, with a fine red cheek; flesh yellow, juicy, sweet, and excellent. Wonderfully productive and hardy. Freestone. Last of August.

THE ELBERTA.

Crawford's Late—Fruit of the largest size ; skin yellow, or greenish yellow, with dull red cheek ; flesh yellow ; productive. One of the finest late sorts. Freestone. Last of September.

Crosby—This peach, which originated in Massachusetts, has been justly described as an ironclad and frost-proof peach. It, unquestionably, is one of the hardiest peaches of good quality yet introduced, and will carry the peach belt several degrees north. It has borne immense crops where all other kinds in the same orchard were killed. The fruit is full medium size, round, oblate. Color bright yellow, beautifully splashed and striped with crimson. The flesh is light yellow and red at the stone, firm moderately juicy, and of good quality. It ripens about with Old Mixon Free. Freestone.

Early Canada—A hardy, Canadian variety ; color bright red ; juicy, rich and melting. Middle to last of July.

Early Rivers—Large, light straw color, with delicate pink cheek ; flesh juicy and melting, with very rich flavor. Ripens about a week earlier than Hale's. Freestone. Last of August.

Early York—Medium size ; greenish white, covered in the sun with dull red ; flesh greenish white, very tender. Freestone. First of August.

Elberta—A seedling of Chinese cling but entirely free. Large ; yellow with red cheek, juicy and of high quality ; flesh yellow and melting. A very valuable sort Ripens after Early Crawford. Freestone.

Fitzgerald—An improved Early Crawford, being fully equal to it in size, quality and color. The tree commences bearing young, is productive and one of the hardiest. Fruit large ; brilliant color, bright yellow, suffused with red ; flesh deep yellow, best quality. Early September.

Foster—Large ; deep orange red, becoming very dark red on the sunny side ; flesh yellow, very rich and juicy, with sub-acid flavor. Very handsome. Freestone. Last of August.

Garfield (Brigdon)—Flesh yellow, very rich and juicy; color deep orange red becoming dark red on the exposed side ; very attractive ; foliage large, green glossy and peculiar. Free. Middle of September.

Gold Drop—A very early and prolific bearer ; fruit of medium size, of a rich golden yellow, rendering it an attractive and profitable market peach. Quality good. September.

Globe—Fruit exceedingly large, globular in form, quite uniform in size ; of a rich, golden yellow, with a red blush ; flesh very firm, coarse grained, but juicy, yellow shaded with a red tinge toward the pit. Succeeds best in the South. Freestone. Middle of September.

Greensboro—The largest and most beautifully colored of all the early varieties. Double the size of Alexander, ripening at same time. Flesh white, juicy and good. July.

Hale's Early—Raised in Ohio ; medium size ; flesh white, first quality ; ripens middle August.

Hill's Chili—Medium size, dull yellow ; tree very hardy, a good bearer ; highly esteemed as a market fruit everywhere. This variety is regarded by the canners as the very best peach for their purpose, Last of September.

Horton's River—A seedling of Early Rivers. The flesh is white, solid and very juicy; it very strongly resembles Early Rivers in style and size, and is a perfect freestone. *Ripens with Early Rivers.*

Hynes Surprise—A new, valuable early variety. Very hardy in fruit bud ; productive, and entirely a freestone ; ripening *immediately after Early Rivers.*

Kalamazoo—A leading Michigan market sort ; large, yellow, fine quality. Extra productive and profitable. September.

Lord Palmerston—Very large ; skin creamy white, with a pink cheek ; flesh firm, yet melting ; very juicy and rich. Middle to last of September.

Longhurst—Fruit much resembles Early Crawford, being of excellent flavor, size and color. The season of ripening and the extreme hardiness of the tree makes this variety invaluable in the colder climates. Ripens a little later than the Early Crawford.

Matthew's Beauty—A seedling from Randolph County, Ga.; the original tree has been fruiting for eight years and missed but one crop; is being largely planted as the most valuable succession to Elberta yet introduced. Its bearing and shipping qualities are fully equal to Elberta, it is a size larger, superior in quality. ripens about three weeks later. Perfect freestone, skin golden yellow, streaked with red; flesh yellow, firm, of excellent quality. September.

Morris White—Medium; straw color, tinged with red; juicy and delicious; productive. Freestone. Middle of September.

Mountain Rose—Large; red; flesh white, juicy, rich and excellent; one of the best early peaches. Should be in every collection. Freestone. First of August.

Old Mixon Cling—Large, pale yellow, with red cheek; juicy, rich and high flavored; one of the best clingstone peaches. Last of September.

Old Mixon Free—Large, pale yellow, with deep red cheek; tender, rich and good; one of the best. First to middle of September.

Salway—Fruit large, roundish; deep yellow, with a rich marbled brownish red cheek; flesh yellow, juicy, rich and sugary. A new English variety, a good keeper and promising highly as a late showy market sort. Freestone. First of October.

Schumaker — Earlier than Alexander. Medium to large; bright yellow, splashed with crimson; juicy, melting and rich; parts freely from the stone when fully ripe. Middle of July.

Sneed—The earliest peach known; originated in the South, where it has fruited for several years, and, so far, has not failed to ripen eight to ten days before Alexander, and, on account of its earliness, has proven very profitable. Fruit medium size, creamy white, with light blush cheek; excellent quality, resembling its parent, Chinese Cling; productive. July.

Stevens' Rareripe—Very productive and of high color; beautiful. Commences to ripen immediately after Late Crawford and continues three weeks. Last of September and first of October.

Stump the World—Very large, roundish; skin white, with a bright red cheek; flesh white, juicy and good. Freestone. Last of September.

Triumph—Ripens with Alexander, blooms late, sure and abundant bearer; strong, vigorous grower. Fruit good size, yellow, with red and crimson cheek.

Wager—Very large; yellow, more or less colored on the sunny side; juicy, and of fine flavor. Freestone. First of September.

Waterloo—A seedling originated in Waterloo, N. Y.; skin medium to large; whitish-green, marbled with purple; juicy and vinous; ripens with Alexander, and is the best flavored of the earliest peaches.

Wheatland—Ripens between Early and late Crawford, and larger than either of them. Hardy and very productive. Freestone. First to middle of September.

Willett—Flesh juicy and rich; color bright yellow, mostly covered with dark red. This is beyond question one of the largest, if not the largest of all the varieties, and in quality, richness and beauty is unsurpassed. Its value as a market variety ranks with the highest. Freestone. Middle of September.

Yellow Rareripe—Large; deep yellow dotted with red; melting and juicy, with a rich flavor. Freestone. Last of August.

Yellow St. John—Nearly as large as Crawford, fully equal in color. Fruit round, brilliant, showy; one of the earliest yellow peaches. August.

APRICOTS.

The apricot, in quality and appearance, is between the plum and the peach, combining qualities of both. Its very early season of ripening and delightful flavor make it one of the most valuable fruits. We are now able to offer varieties that are extremely hardy and will endure severest climates. The apricot requires the same cultivation as the plum or peach, and for curculio the same treatment as the plum. Size when shipped 2½ to 5 feet, according to variety. Plant 16 to 18 feet apart.

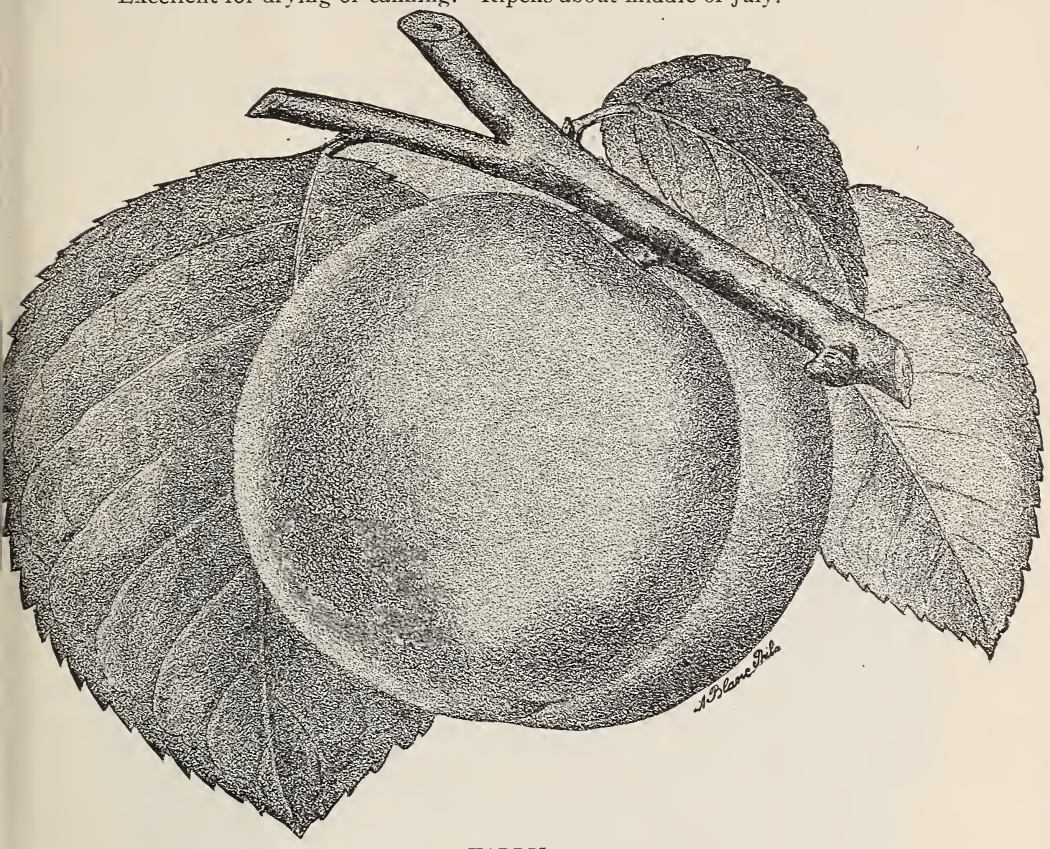
Acme — A new apricot originated from pits received from the Province of Shense, N. W. China. A free and vigorous grower, exceedingly hardy and productive. Fruit of large size, yellow, with red cheek, good quality; freestone. Aug.

Harris—Originated in Geneva. Free; perfectly hardy; comes into bearing young, and very productive. Fruit large, rich, golden yellow; ripens middle of July.

Moorpark—One of the largest; orange, with a red cheek; firm, juicy, with a rich flavor; very productive. August.

Royal—Large, yellow, juicy, rich and delicious; a very fine variety.

St. Ambroise—A good grower and very productive; of good quality; freestone. Excellent for drying or canning. Ripens about middle of July.



HARRIS.

RUSSIAN APRICOTS.

The fruit of the *Seedlings* sent out by many nurserymen is not of much value usually, but certain selected varieties, named below, and now propagated by us are quite good in quality.

Alexander—Tree hardy; an immense bearer; fruit large, yellow, flecked with red; very beautiful, sweet and delicious. July.

Alexis—Tree hardy; an abundant bearer; fruit yellow with red cheek; large to very large; slightly acid, rich and luscious. July.

Catherine—Tree hardy, vigorous and productive; fruit medium, yellow; mild, sub-acid; good. July.

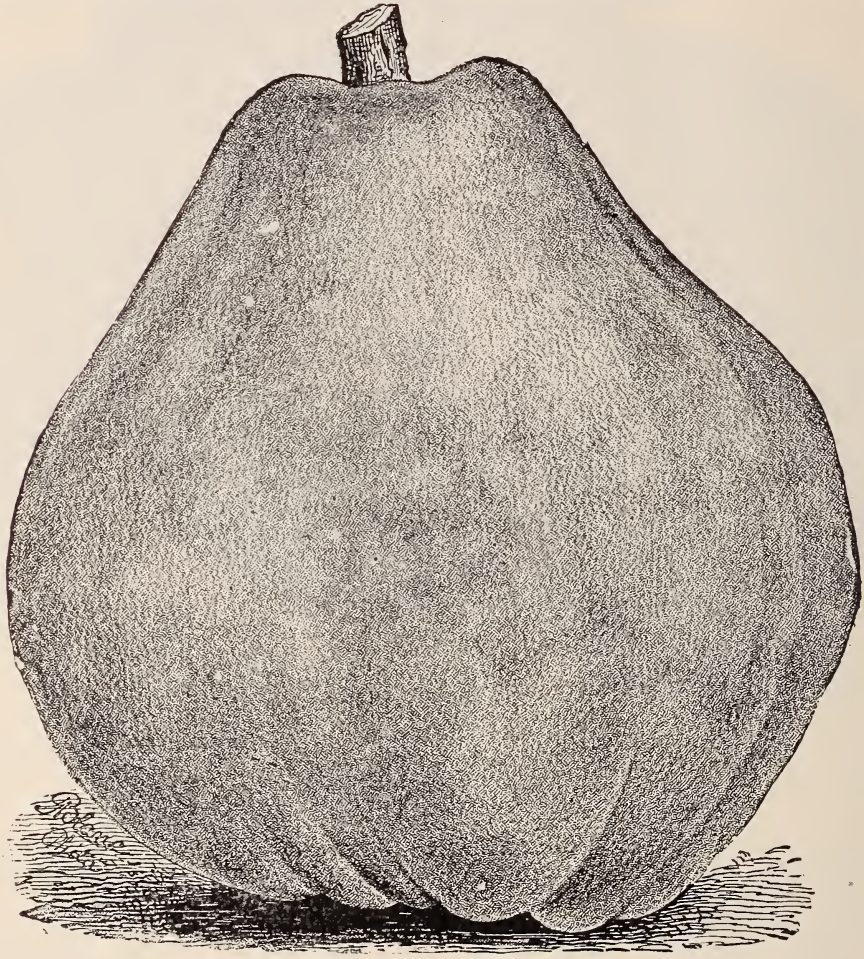
Gibb—Tree hardy and symmetrical; a good bearer; fruit medium, yellow; sub-acid, rich, juicy, the best early variety, ripening about with strawberries; Last of June.

J. L. Budd—A hardy, strong grower and profuse bearer; large, white with red cheek; sweet, juicy, extra fine, with a sweet kernel as fine flavored as the almond; the best late variety. August.

Nicholas—Tree hardy; a splendid bearer; medium to large; white, sweet and melting; a handsome variety. July.

QUINCES.

The quince is attracting a great deal of attention as a market fruit. Scarcely any fruit will pay better in the orchard. The tree is hardy and compact in growth, requires



BOURGEAT.

but little space, is productive, gives regular crops, and comes early into bearing. The fruit is much sought after for canning for winter use.

It flourishes in any good garden soil, which should be kept mellow and well enriched. Prune off all the dead and surplus branches, and thin out the fruit if bearing too freely.

Bourgeat—A golden prolific variety of the best quality, ripening shortly after Orange, and keeping until midwinter. Tree a remarkably strong grower, surpassing all others, yielding immense crops, fruiting at three and four years in nursery rows; leaves large, thick and glossy, so far free from blight and disease. Fruit of largest size, round, rich golden color; smooth, very tender when cooked; has been kept till February in good condition.

Champion—A prolific and constant bearer, fruit averaging larger than the Orange, quality equally fine, and a long keeper; bears extremely young. Ripens late.

Meech's Prolific—A vigorous grower and immensely productive. The fruit is large, lively orange yellow, of great beauty and delightful fragrance; its cooking qualities are unsurpassed.

Orange (Apple)—Fruit large, round, with a short neck; color bright yellow; flesh firm and tough until cooked, when it becomes tender, juicy, and of excellent flavor.

Rea's Mammoth—A seedling variety, raised from the Orange; superior in size to the parent, and is said to be equally as good.

NECTARINES.

The Nectarine requires the same culture and management as the peach, from which it differs only in having smooth skin like the plum. It is peculiarly liable to the attacks of the curculio. The same remedy must be applied as recommended for the plum.

Boston—Large, bright yellow, with a red cheek; flesh yellow, sweet and pleasant flavor; freestone. First of September.

Downton—Large; greenish white, with a dark red cheek; flesh greenish white, rich, and high flavored; one of the best. Freestone.

Early Violet—Medium size; yellowish green, with a purple cheek; flesh pale green, melting, rich, and high flavored; freestone. Last of August.

Elruge—Medium size; greenish yellow, with a dark red cheek; flesh greenish white, juicy, and high flavored; excellent. Beginning of September.

Hardwicke—Large; pale green, with a violet red cheek; flesh pale green, juicy, melting, and rich. End of August.

Pitmaston Orange—Large; orange and yellow; flesh orange, rich, and fine; freestone. An excellent English sort. September.

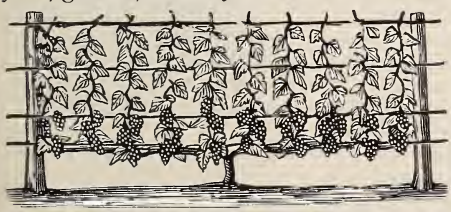
Red Roman—Greenish yellow and red; flesh greenish yellow, rich, and good; freestone. September.

Stanwick—An English variety that has attracted much attention. Ripened under glass there, it is pronounced fine.

Victoria—Very large; one of the finest of the English varieties.

GRAPES.

The vine comes quickly into bearing, yielding fruit usually the second year after planting; requires but little space, and when properly trained, is an ornament to the yard, garden, or vineyard.



NO. 1.

The soil for the grape should be dry; when not naturally so should be thoroughly drained. It should be deeply worked and well manured, always bearing in mind that it is an essential point to secure a warm, sunny exposure.

The best grapevine trellis is probably the wire trellis, with four wires eighteen inches apart. Pruning should be so done that each year two or three of last year's branches shall alone be left, at the spurs of which the present year's growth may start. A fair method is shown in the accompanying illustration.

During the season when the shoots have reached the upper part of the trellis, they may be pinched to prevent further growth. The following spring the canes should be cut back to two buds, as shown in cut No. 2. Allow but one bud to throw out a shoot,

and treat as in the previous year. This system of pruning should be followed each year.

NO. 2.

NUMBER OF VINES PER ACRE.

6 x 6	1210	8 x 8	680	9 x 8	605
6 x 8	907	8 x 10	545	9 x 9	538
6 x 10	726	8 x 12	435	9 x 10	484
6 x 12	605	9 x 6	807	9 x 12	403
8 x 7	777	9 x 7	691	10 x 10	435
				10 x 12	363

Agawam (Rogers No. 15)—Large, round, early and of great vigor of growth. Rich, peculiar aromatic flavor. Considered by Mr. Rogers as the best of his strictly red Hybrids. September.

Brighton—A cross between the Concord and Diana Hamburg. It gives the best of satisfaction. Bunches large, berries of medium size, dark red; flesh sweet, tender, and of the highest quality. Ripens one week earlier than the Delaware. First of September.

Campbell's Early—Clusters large and handsome; berries large, nearly round, black, with light purple bloom; flesh rather firm, but tender; the seeds are few and easily separated from the pulp; quality rich, sweet, slightly vinous; a strong and vigorous grower, with healthy foliage; it ripens very early; the berries do not drop easily from the clusters, and the fruit keeps a long time in perfection; promises to be of great value.

Catawba—Bunches large and loose; berries large, of a coppery red color, becoming purplish when well ripened; later than Isabella; requires the most favorable soils and situations, good culture and warm seasons, to mature perfectly in Western New York. Last of September.

Champion (Talman)—This variety is valued chiefly for its earliness, being some days earlier than the Hartford, and nearly or quite equal to the latter in flavor; black. Aug.

Concord—A popular variety where the choice kinds fail to ripen; universally healthy, vigorous and productive; flesh somewhat buttery, moderately juicy and sweet. Bunch large, nearly black with bloom; early. September.

Cortland (New)—Origin Cortland Co., N. Y. Early, fruit of good quality, the clusters very compact and of fair size, berries quite large with a thin skin and very little pulp. Color black. Free from mildew or rot and the vines require no protection in the coldest climate where grape vines grow. Season middle of August.

Delaware—Still holds its own as one of the finest grapes. Bunches small, compact, shouldered; berries rather small, round; skin thin, light red; flesh very juicy, without any hard pulp, with an exceedingly sweet, spicy and delicious flavor. Vines moderately vigorous, very hardy and productive. September.

Early Ohio—The earliest good black grape known; ripens ten days to two weeks before Moore's Early. Bunch large, compact, shouldered; berry medium, covered with heavy bloom; leaves very large, thick, leathery; foliage heavy and perfectly healthy. Fully as hardy, or more so, than Concord. A vigorous grower, very productive, and of good quality. Berry adheres firmly to stem. One of the best shippers. *The only early grape that will not shell.*

Eaton—Black; bunch and berry of the largest size; not quite so early or sweet as its parent, the Concord but less foxy, pleasant, juicy, with tender pulp; vine very vigorous, healthy and productive. Originated in Massachusetts.

Empire State—The Empire State is a seedling of the Hartford Prolific, fertilized with the Clinton. A good grower and fruiter in every respect. Bunches large, from six to ten inches long, shouldered; berry medium to large; roundish oval; color white with very light tinge of yellow, covered with a thick white bloom; flesh tender, juicy, rich, sweet and sprightly, with a slight trace of native aroma; con-

tinuing a long time in use ; vine very hardy. Its great productiveness, beautiful color, good quality, extreme hardiness and vigor and healthfulness of vine and foliage, size and compactness of cluster and good shipping qualities make it the best White Grape, all things considered, yet produced. Early in September.

Eumelan—Black, bunch good size ; generally compact, shouldered ; berry medium ; flesh tender, sweet ; quality excellent ; vine moderately vigorous ; ripens just after the Hartford. *One of the best table grapes*, and valuable for the amateur.

Green Mountain (Winchell)—A new White grape, very valuable on account of its fine quality and earliness, and the vigor, hardiness and productiveness of the vine. In our large collection, it is the first white grape to ripen, and we conclude after several season's trial, that it is a variety of great merit. This and Winchell have proved to be identical.

Hartford Prolific—Bunches rather large, berries large, globular ; color almost black, covered with a beautiful bloom ; flesh sweet and juicy. Ripens four or five days before Concord ; valuable for its hardiness, abundant bearing and early maturity. August.

Iona—Bunches large, shouldered, not compact ; berries medium ; round, pale red ; flesh tender ; little pulp ; flavor rich, vinous, excellent. Ripens two weeks after Concord. A good keeper.

Isabella—Bunches large, shouldered ; berries round, oval, rather large, dark purple ; flesh tender, juicy, sweet, with a fine aroma. Season of ripening late.

Lindley (Roger's No. 9)—Rich red, resembles No. 3 in appearance, bnt distinct in flavor. First of September.

McPike—A new black grape said to be a seedling of the Worden, and to produce berries of great size. First to middle of September.

Martha—A seedling of the Concord, which it resembles in growth and hardiness. Bunch of good size, and berry large, of pale green or light color ; buttery, sweet, juicy, sprightly. Ripens with the Concord. September.

Massasoit (Rogers' No. 3)—Bunch medium, rather loose ; berry medium ; flesh tender and sweet ; very good ; one of the best flavored of the Rogers'. Early as Hartford. A desirable garden variety. Color red.

Moore's Early—A seedling of Concord, combining the vigor, health and productiveness of Concord, and ten days earlier than Hartford. In quality, hardly to be distinguished from Concord. Bunch large, berries very large, black. August.

Moore's Diamond — White ; bunch large, compact, shouldered ; berries large, round, skin thick, firm ; flesh tender, juicy, with but little pulp. Vine a good grower with thick, healthy foliage ; said to be hardy and productive. September.

WORDEN.

Niagara—Bunch medium to large, compact, occasionally shouldered ; berry large, roundish, uniform, of a pale greenish color ; flesh slightly pulpy, tender, sweet, Vine remarkably vigorous, healthy and productive. September.

Pocklington—Is a seedling from Concord ; fruit a light golden yellow, clear, juicy and sweet to the center, with little or no pulp ; bunches very large, sometimes shouldered ; berries round, very large and thickly set. First of September.

Salem (No. 22)—Bunch large and compact ; berry large, of a light chestnut or Catawba color, thick skinned, perfectly free from hard pulp ; very sweet and sprightly, with a most exquisite aromatic flavor ; as early as the Delaware ; keeps well. First of September.

Ulster Prolific—A red grape of best quality; bunch medium not shouldered, compact; berries medium to large, skin thick and tough; ripens soon after Concord and keeps well. Vine a fair grower, moderately hardy, healthy and quite productive.

Vergennes—Very productive; clusters large, berries large, holding firmly to the stems; color light amber; flavor rich and delicious; flesh meaty and tender. Ripens with Concord, and is an excellent late keeper. September.

Wilder (No. 4)—Large; bunches generally shouldered; berry round and large; flesh buttery, with a somewhat fibrous center; sweet, rather sprightly, black. Middle of September.

Worden—Bunches large, handsome, double shouldered; berries large, sweet, lively, with very little of the foxy or native flavor. Being ten days earlier than Concord, it ripens well in cold localities; vine very thrifty and vigorous, perfectly hardy and a good bearer. It is coming rapidly into repute as one of the leading sorts for general cultivation, ranking in this respect with Concord, to which it is decidedly superior in quality; black. Middle of September.

Wyoming Red—An early, light red grape with ironclad vine and foliage; always yielding enormous crops. It ripens with Delaware, which it resembles in appearance, though larger in bunch and berry. A valuable grape for market growing.

SMALL FRUITS.

The small fruits, such as Raspberries, Blackberries, Gooseberries, Currants, etc., ripening from the first of June till fall, are everywhere capable of successful cultivation, and yield large returns at comparatively small expense. They should have a place in every garden. Thanks to evaporators and self-sealing cans, they may be had throughout the year almost as fresh as when gathered.

STRAWBERRIES.

As it is nearly impossible to ship strawberries with safety by freight, with our other stock, we always ship them by express direct to our customers. We would recommend the following leading varieties.

Bidwell	Greenville	Parry
Bubach	James Vick	Sharpless
Charles Downing	Jewell	Triomphe de Gand
Crescent	Jucunda	William Belt
Gandry	Manchester	Wilson's Albany
Great American	Marshall	

RASPBERRIES.

The fruit comes just after strawberries, and when properly cultivated is quite profitable.

Plant on strong soil, manure freely, cultivate well or mulch heavily. For field, rows seven feet apart, four feet in row. Pinch off canes when three feet high, and prune the laterals the following spring, within twelve or eighteen inches of the cane. Cut out old wood each year immediately after the bearing season is over. Cover tender varieties in winter by bending down and throwing on earth or coarse litter. In the spring they should be raised and tied to a stake.

RED RASPBERRIES.

Columbian—A new red raspberry originated in Oneida County, New York State. Said to be a seedling of the Cuthbert, grown near the Gregg and believed to be a cross between the two. One of the most vigorous growers of the red raspberry family. Fruit very large, often an inch in diameter; shape conical, color dark red, bordering on purple. Adheres firmly to the stem and will dry on the bush if not picked. Wonderfully prolific and perfectly hardy.

Cuthbert—A variety of the greatest excellence. One of the few kinds that may be pronounced perfectly hardy. The canes are tall and vigorous, and enormously productive. Berries very large, conical; rich crimson; very handsome, and so firm that they can be shipped hundreds of miles by rail without injury Flavor very luscious, best; commences to ripen moderately early, and holds on until most others are gone.

Hansell—One of the very earliest and most desirable of Red Raspberries; color light scarlet; quality excellent; very productive.

Loudon—Said to be a seedling of the Turner crossed with Cuthbert. Large, broadly conical, beautiful red. Ripens about with Cuthbert, continuing later, and in quality fully as good as that variety.

Marlboro—A strong grower, with heavy canes and laterals; hardy. Fruit very large; bright crimson, holding its color well. An exceedingly early variety, and a vigorous, heavy bearer, of excellent quality. A truly reliable acquisition.

Miller—Very early; as large as Cuthbert; color bright red; bush hardy, healthy, and productive; succeeds on a great variety of soils.

Shaffer's Colossal—Berries are large, of a dull purplish, unattractive color, rather soft, but luscious, and of a rich, sprightly flavor. Whilst its color and lack of firmness render it unfit for market purposes, it is unrivaled for family use, and is one of the best for canning. Late.

Superlative (Bunyards) — A splendid foreign red raspberry. Very large, fine color, firm, and of best quality. We have tested it in our grounds, and commend it to all who desire the *largest, handsomest and choicest fruit.* One of the best novelties in this line.

COLUMBIAN.

YELLOW RASPBERRIES.

Golden Queen—A seedling of Cuthbert, equaling that variety in vigor of bush and productiveness. Fruit large; color a pure yellow; quality best. Ripens with Cuthbert. A decided acquisition.

Golden Caroline (Caroline Yellow)—A yellow cap variety, medium to large; a rich orange color; moderately firm, very hardy and prolific; a valuable garden variety.

BLACK CAPS.

Cumberland—A new Black Cap, of very large size; good quality, hardy and productive; mid-season.

Eureka (Black Cap)—Very large, glossy black, juicy, rich; hardy and very productive. We regard it as a valuable very early variety.

Gregg—One of the most valuable varieties of the black cap family; fruit larger than the Mammoth Cluster, but not quite so good in quality; ripens some days later; hardy, a vigorous grower and great yielder.

Johnston's Sweet—This is the sweetest Raspberry grown. It takes less sugar either for the table or for canning or evaporating, than any other sort. The flavor is delicious. It is a great bearer; nearly equal in size to Gregg.

Kansas (Black Cap)—A valuable second early variety; very large, handsome, firm, and of excellent quality; very hardy and productive. One of the best Black Caps.

Mammoth Cluster (McCormick)—A large and very productive variety of black cap. Quality good; ripens just after Souhegan and before the Gregg.

Ohio—Berry not quite as large as Gregg, but finer quality and the plants more hardy and will bear more successive crops.

Souhegan—Large; black, without bloom and of medium quality. Very hardy and a great bearer; a little earlier than Mammoth Cluster.

BLACKBERRIES.

Plant on good land, *moderately* manured. Rows seven feet apart, three feet in the rows for field; prune as with Raspberries. Form a hedge or tie to wire. Cultivate *shallow*.

RATHBUN.

Agawam — Of medium size, jet black, sweet, melting to the core. Plant hardy and very prolific. A fine early variety.

Early Harvest—A new variety of great promise, being exceedingly early in time of ripening and always reliable. The canes are strong and upright in growth, branching stout and vigorously. Hardier than Kittatinny or Lawton; an enormous bearer. Berries sweet and of the highest quality, though not as large as some varieties.

Eldorado—A valuable new variety; fruit medium size, jet black, melting, sweet, and rich; plant hardy and very productive.

Erie—This is a hardy blackberry that originated near Lake Erie. The bush is healthy and very productive, as well as hardy; fruit large, round, jet black, and good quality. Ripens very early and is a decided acquisition.

Iceberg—This wonderful berry is the origination of the far-famed Luther Burbank, whose remarkable success in the production of valuable new plants has given him the title of the "Wizard of Horticulture." The fruit is white transparent; the seeds, which are unusually small, can be seen in the ripe berries. The clusters are larger than those of Lawton; individual berries

as large; earlier, sweeter, more tender and melting throughout, though as firm as Lawton is when ripe. Tests for hardiness in the northern part of Western New York have shown it to be not wanting in this important respect, it having gone through the cold winters of that section entirely without injury.

Kittatinny—Commences to ripen after the Wilson's Early, and continues longer in bearing; is ripe as soon as black, and much earlier, sweeter and better in all respects than the Lawton, which it resembles in plant and fruit.

Lawton—Fruit very large and black; and of excellent quality; an abundant bearer.

Minnewaski—Large, early, very hardy. A great bearer.

Rathbun—Fruit very large, with small seeds, no hard core. Sweet, luscious, high flavor; color jet black; firm. Berries will measure an inch and a half long. Plant strong, erect. Roots at the tips like the blackcap; hardy and prolific. Forty-five berries filled a quart strawberry box.

Snyder—Extremely hardy, enormously productive, medium size, no hard, sour core; half as many thorns as Lawton or Kittatinny, and they are nearly straight and short; exceedingly productive.

Taylor—One of the largest blackberries grown. Fruit of the best quality, melting and without core; very productive, and as hardy as the Snyder.

Wachusetts Thornless—Fruit of medium size, oblong, oval, moderately firm; sweet and good, and less acid than any blackberry we have seen It is a good keeper; ships well. It is also very hardy, and comparatively *free from thorns.*

Wilson's Early—Of good size, very early; beautiful dark color, of sweet, excellent flavor and very productive. Ripens the whole crop nearly together.

Wilson, Jr.—A week earlier than Old Wilson, from which it is a seedling. Of largest size, and enormously productive; promises to be a very valuable sort. In severe climates should have winter protection.

DEWBERRIES OR RUNNING BLACKBERRIES.

Lucretia—The plants are perfectly hardy and healthy, and remarkably productive. The flowers are very large and showy. The fruit, which ripens with the Mammoth Cluster Raspberry, is very large, soft, sweet and luscious throughout, without any hard center or core. As the Dewberry roots only from the tips, and does not sprout like blackberries, this will be much more desirable for garden culture, and the trailing habit of the plants will render winter protection easily accomplished in cold climates, where that precaution may be necessary. The Lucretia has proved to be the best variety of Dewberries, and is recognized as a very valuable acquisition to the list of small fruit; there are, however, many other varieties, most of which should be avoided, many being entirely worthless.

LOGAN BERRY.

A decided novelty; being a hybrid between a blackberry and a raspberry. Fruit as large as the blackberry and of same shape; color dark red when fully ripe; partakes of the flavor of the blackberry and raspberry; pleasant, mild, vinous.

GOOSEBERRIES.

This fruit requires the same cultivation as the currant. The surest method to prevent mildew is to plant thickly in the rows, and mulch deeply six or more inches with straw, tan bark, coal ashes, etc. Plantations thus treated have borne large crops for twenty years. The mulch retains moisture in the dryest weather; the few weeds that push up are pulled, and the fruit is large and more evenly ripened. In mulching, be sure the ground is UNDERDRAINED, or it is worse than useless. Good cultivation is better than HALF mulching. Put it on thick. In a dry season the extra amount of fruit will doubly pay for the material used, not to speak of the saving of labor and cleanliness of the fruit. The price is remunerative, and the demand is yearly increasing. The American varieties are not subject to mildew.

ENGLISH GOOSEBERRIES.

The number of varieties of English Gooseberries is almost innumerable. The fruit is generally large and handsome.

Columbus—This is one of the most valuable introductions of recent years in small fruits, and it fully sustains the high opinion first formed of it. It was introduced by us a few years ago. The fruit is of largest size, handsome, of a greenish yellow color, and the quality is excellent. The plant is vigorous and productive and does not mildew. It merits a place in every garden.

Crown Bob—Large; roundish oval, red, hairy; of first quality.

Industry—An English variety; quite as free from mildew as our American sorts; very fine in quality; large size. Handsome, showy red fruit; wonderfully productive.

INDUSTRY.

Whitesmith—Fruit very large; oblong; light green; downy; flavor excellent; erect branches. Succeeds better than most English varieties and bears abundantly.

AMERICAN GOOSEBERRIES.

Downing—Fruit larger than Houghton; roundish; light green, with distinct veins; skin smooth; flesh rather soft; juicy and very good. Vigorous and productive.

Houghton—A medium sized American variety, which bears abundant and regular crops, and never mildews; fruit smooth, red; tender and very good; valuable.

Pearl—An exceedingly prolific variety that has been well tested and ranks No. 1 in healthfulness, vigor of growth, freedom from mildew and productiveness. Same color as Downing; seems to possess all the good points of that variety with a little larger fruit and rather more prolific.

Red Jacket—An American seedling of large size; smooth, prolific and hardy, of best quality. Has been well tested over a wide extent of territory by the side of all the leading varieties, and so far the freest from mildew, both in leaf and fruit, of them all. A wonderful cropper, with bright, clean, heathy foliage.

Smith's Improved—From Vermont. Large, oval; light green with bloom; flesh moderately firm; sweet and good. Vigorous grower.

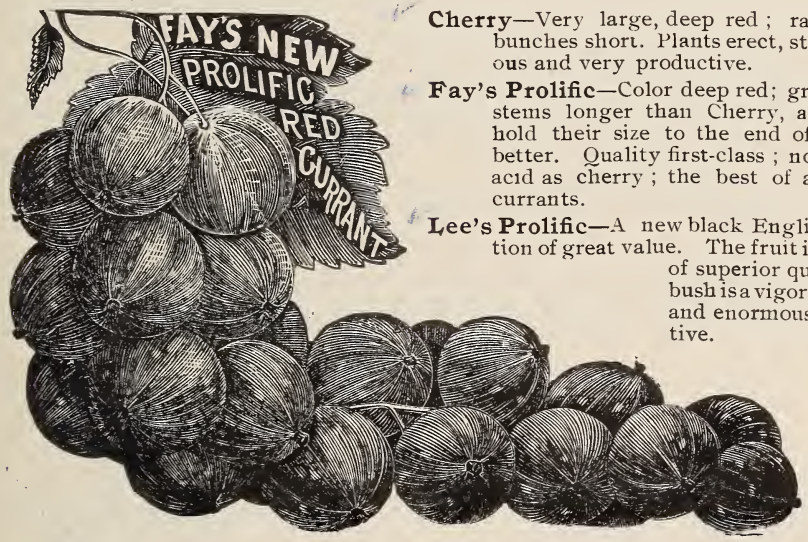
CURRANTS.

This fruit comes partly with the Raspberry, but follows it several weeks. Indeed none of the small fruits will remain so long upon the bushes without injury as the currant. An easy method of destroying the currant worm is by the use of powdered white hellebore (veratrum album).

Set four feet apart in rich ground; cultivate well or mulch heavily; prune out old wood; so that each remaining shoot will have room to grow; if the currant worm appears dust with hellebore every three weeks. Manure freely.

Black Champion—Large, black, excellent.

Black Naples—Very large, black; rich, tender and excellent for jellies and wine; very productive.



Cherry—Very large, deep red; rather acid; bunches short. Plants erect, stout, vigorous and very productive.

Fay's Prolific—Color deep red; great bearer; stems longer than Cherry, and berries hold their size to the end of the stem better. Quality first-class; not quite so acid as cherry; the best of all the red currants.

Lee's Prolific—A new black English production of great value. The fruit is large and of superior quality; the bush is a vigorous grower and enormously productive.

North Star—A new variety. The average length of the bunches is four inches; the berries from a single bunch, thirty in number, placed side by side, touching, covered a line twelve inches long. The fruit is very sweet and rich in quality, firm, a good market berry, desirable as a dessert fruit in the natural state, and unequalled for jelly. The length and abundance of the clusters make it possible to pick 25 per cent. more fruit in the same length of time from this than from other sorts.

Pomona—A new red currant of good size; very productive, sweet, of excellent quality.

Prince Albert—Berry large, light red, bunch long; an erect grower and immense bearer; foliage distinct; ripens late; valuable.

Pres. Wilder—A new red currant, fruit large, fine flavored, great yielder, very profitable for market.

Red Cross—A fine new red currant of large size; long clusters; mild, pleasant flavor; a vigorous grower and very productive.

Red Dutch—An old, well known sort; berry of medium size and good quality; bunch long, plant an upright grower and very prolific.

Versaillaise—Very large, red; bunch long, of great beauty and excellent quality; one of the finest and best, and should be in every collection. Very productive.

Victoria—Large, bright red, with very long bunches; late; a good bearer.

White Dutch—Well-known, of medium size and excellent quality.

White Grape—Very large, yellowish white, sweet, or very mild acid, excellent quality and valuable for the table. The finest of the white sorts. Very distinct from White Dutch, having a low, spreading habit and dark green foliage. Very productive.

ASPARAGUS.

To make a good asparagus bed, the plants may be set in the fall or early spring. Prepare a plat of fine loamy soil, to which has been added a liberal dressing of good manure. Select two-year, or strong one-year plants; and for a garden, set in rows 18 to 20 inches apart, with plants 10 to 12 inches in a row.

Make a small mound of the soil, over which the roots should be evenly spread, so that the crowns, when covered, shall be three inches below the surface of the ground. If planted in the fall, the whole bed should be covered before winter sets in, with two or three inches of coarse stable manure, which may be lightly forked in between the rows as soon as the ground is softened in the spring.

Columbian Mammoth White—Produces shoots which are white and remain so as long as fit for use. In addition to the marvelous advantage of its white color, the Columbian Mammoth White Asparagus is even more robust and vigorous in habit, and throws larger shoots and fully as many of them, as the Conover's Colossal. Market gardeners, growers for canners, and amateurs, should give this great acquisition a thorough trial.

Conover's Colossal—Very large size and of excellent quality; has superceded the old varieties.

Giant—This is the old and well known popular variety, tender and very rich.

Palmetto—A very early variety; even, regular size, of excellent quality.

Queen—Strong, vigorous grower, producing extra large stalks of finest quality, of a decided pink color. For canning or cooking in any way its quality is unsurpassed.

RHUBARB, OR PIE PLANT.

Deep, rich, moist soil is best, but it is such a strong, vigorous-growing plant, it will thrive almost anywhere. Plant in rows four feet apart, and the plants three feet apart. Set the roots so that the crowns are about an inch below the surface. Rhubarb is a gross feeder; the more manure it is given, the larger and finer the yield.

Myatt's Linnæus—Early, very large, tender and delicately flavored; requires less sugar than other sorts.

Victoria—This variety, if planted in a rich soil and properly cultivated, will produce tender stalks three feet long, and from one to two inches in diameter.

Wine Plant—The large size, fine texture and superior quality of this new variety over the old cultivated "Pie Plants" cannot be conceived by those who have never grown it. We have grown stalks frequently, with good cultivation, as thick as a man's wrist, and from three to four feet in length. In addition to its superior quality, for *culinary purposes* both when used fresh or for canning, it can be pressed and the juice made into a healthful wine, which for medicinal purposes or as a pleasant beverage, is considered superior to the best sherry wines.

NUTS.

Almonds.

HARD SHELL—A fine, hardy variety with a large plump kernel.

SOFT SHELL—Not as hardy as above; kernels sweet and rich.

Butternut, or White Walnut.

A fine native tree, producing a large, longish nut, which is prized for its sweet, oily nutritious kernel.

Chestnut.

AMERICAN SWEET—A valuable native tree, useful and ornamental; timber is very durable, and possesses a fine grain for oil finish. Nuts sweet, of delicate flavor, and are a valuable article of commerce.

JAPAN—Very distinct from all other chestnuts, dwarf grower; productive, usually producing nuts when two or three years old. Nuts of immense size, far surpassing all other kinds; of fair quality when outside skin is removed.

SPANISH—A handsome round headed tree, producing abundantly very large nuts that find a ready market at good prices. Twenty-five dollars have been realized at one fruiting from the nuts of a single tree. Not as sweet as the American and tree not as hardy.

Filbert.

ENGLISH—Of easiest culture, growing 6 to 8 feet high, entirely hardy, and one of the most profitable and satisfactory nuts to grow, succeeding on almost all soils, bearing early and abundantly, nuts nearly round, rich and of excellent flavor.

KENTISH COB—One of the best; large size, oblong, of excellent quality.

Hickory.

SHELL BARK—To our taste no other nut that grows, either foreign or native, is superior to this in quality; it possesses a peculiar, rich, nutty flavor excelled by none. The tree is of sturdy lofty growth. The wood, on account of its great strength and elasticity, is highly prized for making agricultural implements, and is unsurpassed for fuel.

Pecan.

Not hardy in the north, one of the best and most profitable where it succeeds. Makes a very large, tall tree, producing its thin-shelled, delicious nuts in profusion.

Walnut.

BLACK—A native tree of large size and majestic form, beautiful foliage. The most valuable of all trees for its timber, which enters largely into the manufacture of fine furniture and cabinet ware, and brings the highest price in market. Tree a rapid grower, producing a large round nut of excellent quality.

ENGLISH DWARF PROLIFIC (Præparturiens)—A dwarf variety of English Walnut commences bearing very young; very prolific. Nuts like the parent.

FRENCH CHABERTE—One of the best, very productive, extra fine quality.

FRENCH, ENGLISH OR MADEIRA NUT—A fine, lofty growing tree, with a handsome spreading head. Where hardy it produces immense crops of its thin shelled delicious nuts, which are always in demand at good prices; fruit in green state is highly esteemed for pickling. Not hardy enough for general culture in the north.

JAPAN MAX CORDIFORMIS—Differs from Sieboldi in form of nuts, which are broad-pointed, flattened, resembling somewhat Shell-bark Hickory.

JAPAN SIEBOLDI—Perfectly hardy here, rapid grower, handsome form, immense leaves; bears young and abundantly; one of the finest ornamental trees. Nuts produced in clusters; resembles Butternut in shape and quality; smaller with smooth and thinner shell. Worthy of extensive planting.

NAT. SIZE
CHESTNUT.
JAPAN MAMMOTH
CHESTNUT

Ornamental Department.

No pains are spared to produce the finest specimens of the very best varieties of ornamental trees and shrubs. We list only those which are hardy.

Customers must not expect the young stock, however, to show the beauty of the fully developed tree or shrub; that beauty is reached only as age and growth are attained. Pictures and descriptions can be of fully developed specimens only; but the young stock when delivered may have even an apparently scraggy and irregular growth.

Great mistakes are usually made in planting large growing shade trees too close together, which prevents symmetrical development. One expects to remove the extra trees when they get larger, and they look so far apart when the young trees are planted proper distances apart. But one forgets to remove them until all chance of symmetry is lost. Large holes should be dug to give the roots a good chance.

Grass should not be allowed to grow up to the young trees or shrubs, but a reasonable space should be kept thoroughly cultivated about the roots at least until full vigor is established. Otherwise they will be stunted and utterly ruined.

Most deciduous trees and shrubs may be planted in either spring or fall, but *evergreens should be planted in the spring only.*

Ornamental trees require only such pruning as will prevent a straggling growth of head, or will bring the head up to a desired height. Shrubs should be pruned so as to bring out the most beautiful natural shape, and induce in flowering varieties the greatest amount of bloom. With flowering shrubs these principles may be observed. Varieties flowering in spring should be pruned and pinched, and old wood cut out after flowering, from time to time through the growing season, in order to induce growth of flowering wood; and not in the spring before blooming, which would remove the blossoms buds. Those which like Hydrangeas, bloom late in the season, should be pruned in the spring before they start to grow, since their flowering wood is then about to be produced. There is no advantage in trimming all specimens to one form, or in shearing. The natural beauty of each specimen is to be developed. Hedges, however, are necessarily to be sheared into regular form.

DECIDUOUS TREES.

(*Those varieties which do not retain their foliage during the winter.*)

Alder (Alnus).

The cut-leaved varieties of the alder are among the most excellent ornamental trees in cultivation.

IMPERIAL CUT-LEAF (Laciniata imperialis). A charming tree of stately, graceful growth, having beautiful, deeply cut foliage. Vigorous and very hardy. Unsurpassed for the lawn. Attains a height of about twenty feet.

Ash (Fraxinus).

This is a large family, but there are only a few varieties of especial merit.

EUROPEAN FLOWERING (Ornus)—Flowers greenish white, fringe-like, appearing only on the ends of the branches. Blooms early in June. Twenty to thirty feet high when fully grown.

GOLD BARKED (Aurea)—Conspicuous at all times but particularly in winter, on account of its yellow bark and twisted branches. Fifteen to twenty feet when fully grown.

Bechtel's Double-Flowered American Crab.

One of the most beautiful of the many fine varieties of flowering Crabs. Tree of medium size, covered in early spring with large, beautiful, double fragrant flowers of a delicate pink color. From a distance the flowers have the appearance of small roses. A great acquisition, and certain to become very popular as soon as known. Blooms when quite young.

Beech (Fagus).

The varieties which we describe are truly elegant lawn trees, and of a magnificence, when they attain age, to be found in but few other sorts.

FERN-LEAVED (Heterophylla)—Of elegant form, round and compact. Fern-like foliage, delicately cut. The tree has a wavy, graceful aspect, seldom seen in other sorts. When fully grown, twenty-five to thirty-five feet high.

PURPLE-LEAVED (Purpurea)—A most elegant lawn tree, of striking appearance. Early in the season the foliage is deep purple, later it changes to crimson, and again, in the fall, to a dull purplish green. Forty to fifty feet when fully grown.

Birch (Betula).

Graceful, airy trees, suitable for the lawn. They are hardy and thrive in all soils.

EUROPEAN WHITE (Alba)—Silvery bark and slender branches. Fifteen to thirty feet high when fully grown.

BECHTEL'S DOUBLE-FLOWERED AMERICAN CRAB.

PURPLE-LEAVED (Feliis purpureis)—A vigorous grower. Foliage purple. Twenty to twenty-five feet high when fully grown.

Catalpa.

The catalpas flower in July, when few varieties are in bloom, and are therefore desirable. The blossoms are large and quite fragrant. Large, heart-shaped, yellowish green leaves. Very effective, tropical looking lawn trees.

BUNGEI. CHINESE CATALPA.—A species from China, of dwarf habit, growing only from three to five feet high. Foliage large and glossy; a shy bloomer. Top-grafted on tall stems it makes an effective umbrella-shaped tree.

GOLDEN (Aurea)—A dwarfish tree of rapid growth, with large heart-shaped leaves of golden yellow in the spring, changing to green later in the season. Makes a low bush, six to eight feet high when fully grown.

KÆMPFERI. JAPAN CATALPA.—Introduced from Japan by Siebold. A species of rapid growth, with deep green glossy foliage. Flowers fragrant, cream colored, speckled with purple and yellow; not so large as those of syringæfolia; panicle also is smaller and more loose; seed pods long and very narrow; two weeks later than syringæfolia.

SYRINGÆFOLIA—A very showy tree, vigorous, irregular, and spreading. Large, heart-shaped leaves. White and purple flowers, borne in pyramidal clusters a foot long. Twenty-five to thirty-five feet when fully grown.

SPECIOSA—A variety which is said to have originated in the west. It is finer and hardier than the common; hence better adapted for ornamental planting. Its blossoms open two or three weeks earlier than other sorts. A large, spreading tree.

Cherry (Cerasus).

Of the easiest culture, and very desirable because of their flowering so early in the season.

CHINESE DOUBLE-FLOWERED CHERRY—Misnamed humilis fl. pl. A fine sort, with large double white flowers.

DWARF WHITE FLOWERING (Humilis, flore pleno)—Blooms in May. Flowers double white. A pretty little tree. Ten to twelve feet in height when fully grown.

LARGE DOUBLE FLOWERING (Flore alba pleno)—A beautiful and attractive tree. Blooms in May and the flowers are so numerous as to completely hide the branches from view. Blossoms white and very double. Fifteen to twenty feet high when fully grown.

BUNGEI.

Elm (Ulmus).

For street and park planting there is no finer tree than the noble American elm of our own forests. There are also other varieties of great value for the lawn.

AMERICAN WHITE or WEEPING—The well-known native sort.

ENGLISH (Campestris)—Smaller leaves and darker colored bark than the American. The branches project from the trunk nearly at right angles. Forty to fifty feet when it has attained full size.

ENGLISH CORK-BARKED (Suberosa)—Peculiar leaves, rough on both sides. Young wood very corky. Twenty to thirty-five feet when fully grown.

GOLDEN-LEAVED ELM. A moderate grower; beautiful golden-yellow foliage; burns somewhat in the sun and should be planted in half-shade.

HUNTINGDON ELM. Of very erect habit, and rapid, vigorous growth. Bark clean and smooth. One of the finest Elms for any purpose.

SCOTCH or WYCH ELM. A fine spreading tree, of rapid growth and large foliage.

Honey Locust.

THREE THORNED ACACIA (*Gleditschia Triacanthus*)—A rapid growing tree; delicate foliage, of a beautiful fresh, lively green, and strong thorns. Makes an exceedingly handsome, impenetrable and valuable hedge.

Horse Chestnut (Æsculus).

Horse Chestnuts are very desirable trees for the lawn, park or street. They are of elegant habit, magnificent foliage, and produce fine, large spikes of flowers in May and June.

RED FLOWERING (Rubicunda)—Forms a round, compact head. Red flowers; very showy. The leaves are darker than the White Flowering. Blooms late in May, just after the White Flowering. A slow grower. Makes a tree twenty to twenty-five feet in height.

WHITE FLOWERING (Hippocastanum)—Decidedly the finest variety of this family. Makes a beautiful tree of regular outline. Exceedingly hardy, and free from all diseases. Covered in May with magnificent white flowers tinged with red. Forty to fifty feet when fully grown.

Judas Tree, or Red Bud (Cercis).

The Judas deserves to be classed among the most beautiful ornamental trees.

AMERICAN (Canadensis)—Delicate pink flowers. Blossoms before the foliage appears. Leaves perfectly heart-shaped. A pretty tree for the lawn. Makes a very small tree.

JAPAN (Japonica)—Deep green, heart-shaped leaves. Rich, very pink flowers, quite large. Blooms in early spring. Makes but a small tree.

Laburnum (Cytisus).

The peculiar chain-like blossoms of the laburnum are highly prized where a showy effect is desired.

COMMON or GOLDEN CHAIN—A charming variety for the lawn. Smooth, shining foliage, and long, drooping racemes of golden flowers. Blooms in June. Ten to fifteen feet when fully grown.

SCOTCH or ALPINE (Alpina)—From the Alps. Foliage larger than the Golden Chain, but flowers are similar. Blooms in July. Twenty to thirty feet at full size.

Larch (Larix).

EUROPEAN (Europæa)—A rapid growing, pyramidal tree. Small, drooping branched. Makes a large tree.

Linden, or Lime (Tilia).

The lindens are beautiful trees, and should be planted extensively. In addition to other qualities, their flowers are fragrant. They bloom in June.

AMERICAN or BASSWOOD (Americana)—A rapid-growing, beautiful native tree, with very large leaves. Fragrant flowers. Forty to sixty feet when fully grown.

EUROPEAN (Europæa)—Forms a fine pyramidal tree. The flowers are fragrant and the foliage large. Thirty to fifty feet when fully grown.

WHITE, or SILVER-LEAVED (Argentea)—A handsome, vigorous growing tree. Large leaves, whitish on the under side, having a beautiful appearance when ruffled by the wind. Twenty to twenty-five feet when fully grown.

Magnolia.

The magnolia is indeed "a thing of beauty," but it is so exceedingly difficult to transplant with safety that we cannot advise our patrons to order them expecting to meet with entire success.

ACUMINATA (Cucumber)—A stately, pyramidal growing, native tree. Leaves six to nine inches long, bluish green. Yellow flowers, tinted with bluish purple. The green fruit resembles the cucumber. Fifty to sixty feet when fully grown.

CONSPICUA (Yulan)—A Chinese species of great beauty. Tree of medium size, shrub-like in growth while young, but attaining the size of a tree. Flowers large, pure white and very numerous, appearing before the leaves.

PURPUREA—An attractive dwarf variety with handsome purple flowers in May or June.

SOULANGEANA—Shrubby and branching while young, but becoming a fair-sized tree. Flowers white and purple, cup shaped and three to five inches in diamter. Flowers large, glossy and massive.

SPECIOSA (Showy flowered)—Similar habit to the Soulangeana ; flowers paler and blooms later.

TRIPETELA (Umbrella Tree)—A hardy native medium-sized tree with enormous long leaves and large white fragrant flowers, four to six inches in diameter in June.

JAPANESE MAPLES.

JAPAN MAPLE (Polymorphum)—This is the normal form or type ; growth slow and shrubby ; foliage small, five-lobed, and of a bright, cheerful green in spring and summer, changing to a lovely dark crimson in autumn ; perfectly hardy when well established. One of the most beautiful and valuable of small sized trees.

JAPANESE MAPLE.

DARK PURPLE-LEAVED JAPAN MAPLE (var. atropurpureum)—Forms a bushy shrub; foliage dark purple and deeply cut ; very ornamental. The hardiest and altogether the best of the Japan Maples. One of the choicest small trees or shrubs in the catalogue.

CUT-LEAVED PURPLE JAPAN MAPLE (var. dissectum atropurpureum)—One of the most striking and handsome varieties of the Japanese Maples. Form dwarf and weeping. The leaves are of a beautiful rose color when young, and change to a deep and constant purple, as they become older. They are also deeply and

delicately cut, giving them an elegant, fern-like appearance. The young growth is long, slender, and pendulous, and like the leaves, has a deep, crimson hue. Besides being an elegant and attractive lawn tree, it is also very useful for conservatory decoration in spring.

Maple (Acer).

The vigorous growth, fine form, hardiness, freedom from disease, and adaptability to all soils, renders the maple one of the best of trees for the purpose of shade. It has few equals for the street or park.

ASH-LEAVED (Negundo Box Elder)—A hardy native sort. Ash-like foliage, spreading head. Rapid growth. Very hardy.

NORWAY (Plantanides)—Large, compact habit, and broad, deep green, shining foliage. A stout, vigorous grower. One of the best for the street or park. Forty to fifty feet when fully grown.

PURPLE-LEAVED (Purpurea)—A strong, robust grower. Leaves deep green on the upper side and purplish red underneath, making it very effective when planted with other sorts.

SYCAMORE, European (Pseudo-plantanus)—A handsome tree of upright growth, large foliage and smooth, ash-gray colored bark. Twenty-five to thirty feet when fully grown.

SCARLET, OR RED (Rubrum) — Produces small deep red blossoms before the leaves appear. In autumn the leaves change to brilliant scarlet. Thirty to forty feet when fully grown.

SUGAR or ROCK (Saccharinum)—The well-known native variety. Valuable for the street or park. Fifty to sixty feet when fully grown.

SCHWEDLERI—A beautiful variety of Purple-Leaf Norway with long shoots and leaves of bright purple and crimson color, which change to purplish green on the older leaves.

SILVER-LEAVED or WHITE (Dasycarpum)—Foliage bright green above and silvery underneath. An exceedingly rapid grower. Makes a large tree.

WIER'S CUT-LEAVED (Wierii laciniatum)—Grows very rapidly, and the shoots are so slender and drooping that it has a decidedly graceful appearance. The leaves are deeply and delicately cut. A large tree if undisturbed, but will stand severe pruning, and so may be easily adapted to small places.

Mountain Ash (Sorbus).

These are highly ornamental trees, particularly when covered with their bright, scarlet berries throughout the fall and winter.

AMERICAN (Americana)—Of coarser growth and foliage than the European, and having larger berries of a lighter color. White blossoms appear in early spring, followed by clusters of scarlet berries.

EUROPEAN (Aucuparia)—A more desirable variety than the American, being of finer growth and form. It blossoms during the early spring, after which the bright scarlet berries are formed in clusters. Twenty to thirty-five feet when fully grown.

OAK-LEAVED (Quercifolia)—One of the finest lawn trees, and very showy whether in bloom or berry. It forms a compact, pyramidal head. The leaves are bright green above and downy beneath. The blossom is white, forming in early spring. Very hardy. Twenty to twenty-five feet when fully grown.

Mulberry (Morus).

These are broad, low branching, large-leaved, fruit-bearing ornamental trees, the demand for which is steadily increasing. They make large-sized trees.

DOWNING (Multicaulis)—A very pretty lawn tree, bearing fruit of good quality. Remains in fruit for about three months.

NEW AMERICAN—A new variety, said to be superior to the Downing.

RUSSIAN—An extremely hardy, rapid-growing tree from Russia. The foliage is abundant and attractive ; said to be very desirable for silk worms. The timber is also valuable. Makes a large tree.

Oak (Quercus.)

AMERICAN WHITE (Alba)—One of the finest American trees, of large size and spreading branches.

SCARLET (Coccinea)—A native tree of rapid growth and especially fine in autumn when the foliage changes to a bright scarlet.

Peach (Persica).

The varieties we describe are truly superb when in bloom, and where something distinct and attractive is desired they will give satisfaction. They are easy to grow, and attain a height of eight to ten feet.

DOUBLE ROSE-FLOWERING (Flore rosea pleno)—Flowers double, pale rose colored, like small roses. A pretty tree. Blooms in May.

DOUBLE WHITE-FLOWERING (Flore alba pleno)—Exceedingly ornamental. Flowers double and pure white. A very attractive tree. Blooms in May.

Plum.

PRUNUS PISSARDII—New. A very remarkable and beautiful new plant, with black bark and dark purple leaves—as dark as those of the Purple Beech and remaining *very constant* until late in the fall; the new growth is especially bright. The fruit is also red and said to be very good. This tree will undoubtedly be a great acquisition.

Poplar (Populus)—

Poplars are desirable where rapid growing varieties are wanted, and they are also very distinct and striking.

BOLLEANA — A very compact upright grower, resembling the Lombardy Poplar; leaves glossy, green above and silvery beneath. The bark of this variety is of a rich green color, giving it a distinct and striking appearance.

CAROLINA (Monilifera)—Of compact habit. A very rapid grower. A desirable tree for the seashore, and for our large cities, where escaping gas kills most shade trees. Fifty to sixty feet when fully grown.

LOMBARDY (Fastigiata)—From Italy. Remarkable for its erect, rapid growth, and tall, spiry form. Of great value for planting with other trees to break the average height and form. Fifty to seventy-five feet.

SALISBURIA.

SILVER-LEAVED, or WHITE (Alba)—Leaves large, green above and pure white underneath. Wonderfully rapid growth; widespreading habit. Has a bad habit of throwing up suckers from the roots.

Salisburia.

MAIDEN-HAIR, or GINKO TREE (Adiantifolia)—One of the most beautiful lawn trees. From Japan. Beautiful, rich, glossy, fern-like foliage. Rapid growth. Rare and elegant. A tall upright grower.

Sycamore (Platanus).

ORIENTAL (P. orientalis)—As an ornamental tree for large grounds, or as a shade tree for street planting, this has no superior. It is a rapid grower, attains a large size, and presents a striking combination of majesty and gracefulness. The foliage is heavy and not subject to the ravages of insects.

Thorn, or English Hawthorn (Cratægus).

The thorns are dense, low-growing trees, and the varieties which we describe are exceedingly ornamental when in bloom. They also stand pruning well, and may be trained to assume picturesque tree forms. They are well adapted to small enclosures, are entirely hardy, and will thrive in all soils.

DOUBLE PINK (Rosea flore pleno)—A pretty tree at all times, but gorgeous in June, when it is covered with double pink blossoms.

DOUBLE WHITE (Alba flore pleno)—A highly ornamental variety, on account of both foliage and flowers. Small, double white flowers. Blooms in June. Makes a pleasing contrast when planted with the pink and scarlet.

PAUL'S DOUBLE SCARLET—(Coccinea fl. pl. Paulii)—Superior to any other variety, and an elegant tree or shrub. The flowers are large, very double, borne in clusters, a rich crimson color, beautiful to behold. Blooms in June.

Tulip Tree (Liriodendron).

TULIPIFERA (White Wood, erroneously Yellow Poplar)—A very large native tree. Pyramidal habit, with broad, fiddle-shaped leaves. Tulip-like flowers.

Willow (Salix).

LAUREL LEAVED—A fine ornamental tree with very large shining leaves.

ROSEMARY-LEAVED (Rosmarinifolia)—Budded about five feet from the ground; this makes one of the most unique and ornamental of trees. The branches are feathery, the leaves silvery, and the form very round and compact. It can be transplanted in any soil with perfect safety, and will endure almost any climate. never grows higher than about ten feet.

WEEPING DECIDUOUS TREES.

The superior grace and excellence of the weeping varieties render them especially adapted to the yard or lawn. In our list will be found all of the kinds which we deem particularly attractive. Customers will, however, be saved from disappointment if they will realize that it is impossible to deliver them from the nursery with the form and shape which they will attain with age. It can no more be done than fruit trees could be delivered with the fruit on.

BIRCH.

Ash (Fraxinus).

GOLDEN-BARKED WEEPING (Aurea pendula)—During the winter the bark is as yellow as gold, making a striking effect. When fully developed it is about eight feet in height.

Beech (Fagus)

WEEPING (Pendula).—Of wonderful grace and beauty when covered with its rich, luxuriant foliage, but quite ungainly in appearance when divested of its leaves. Grows to a height of thirty feet.

Birch (Betula).

CUT-LEAVED WEEPING (Pendula laciniata)—This tree is indeed a picture of delicacy and grace. It presents a combination of attractive charactistics of which no other variety can boast. Mr. Scott, in his "Suburban and Home Grounds," says of it: "No engraving can do it justice; like the palm trees of the tropics, it must be seen in motion, swaying in the lightest breeze, its leaves trembling in the heated air, its white bark glistening through the bright foliage and sparkling in the sun, to enable us to form a true impression of its character." Makes a large tree. Of but little beauty when delivered from the nursery, but it develops into a thing of beauty.

YOUNG'S WEEPING (Pendula Youngii)—Grafted on stems five to six feet high. The fine thread-like shoots droop to the ground, forming a novel and picturesque tree for the lawn. Requires but very little space.

Cherry (Cerasus).

JAPAN WEEPING (Japonica rosea pendula)—Very pretty, rose-colored flowers. Slender branches which droop gracefully to the ground. Undoubtedly one of the most desirable weeping trees in our list. Suitable for small grounds.

Elm (Ulmus).

CAMPERDOWN WEEPING (Camperdown pendula)—Beyond question one of the most satisfactory weeping trees in cultivation. The growth is rapid, the foliage is luxuriant ; it forms a fine-shaped head, and is very hardy.

Lilac.

JAPAN WEEPING—An exceedingly graceful new shrub from the mountains of Pekin, Japan. The flowers are borne in clusters and are very fragrant. It is especially adapted for planting in small yards or lawns, also among groups of shrubbery. It is very hardy, standing in the most exposed situations without injury.

Linden or Lime (Tilia).

WHITE-LEAVED WEEPING (Alba Pendula)—Slender, drooping branches, and large foliage. One of the finest and a good variety for a large lawn.

Mountain Ash (Sorbus).

WEEPING (Pendula)—One of the best known and most popular weeping trees. It is of easy culture, great hardiness and thrives in all soils. Its straggling branches, twisting and turning in every direction, with no training whatever, make a most picturesque and novel sight. Covered during the autumn with bright red berries. It is budded on stems about five feet high.

Mulberry, Teas Weeping.

Perfectly hardy, forming a natural umbrella-shaped top or head; foliage handsome ; a fine ornamental for the lawn.

WEEPING MULBERRY.

Willow (Salix).

BABYLONICA WEEPING—Our common and well-known weeping willow.

KILMARNOCK (Caprea pendula)—The best known and most universally planted of the finer weeping ornamental trees. Its great hardiness, vigorous growth, adaptability to all soils, easy culture, fine form, and unique appearance render it a general favorite. It is budded on Cromwell stock, about five feet from the ground, and forms a perfect umbrella-shaped head in a very few years, without pruning or training. It does not grow in height, but the branches droop gracefully to the ground. It occupies very little space, and will thrive near larger trees, and is, therefore, invaluable for small inclosures. It is also well adapted for cemetery lots.

NEW AMERICAN (Americana pendula)—Grafted about five feet high. An interesting variety, with delicate leaves and slender branches. Quite graceful and ornamental. Never grows large.

THURLOW WEEPING—A new variety of stately proportions with graceful drooping branches and bright, long glossy leaves. The hardiest and best of the willows.

WISCONSIN WEEPING—Similar to the Babylonica, but hardier and considered valuable on account of its ability to resist severe winters.

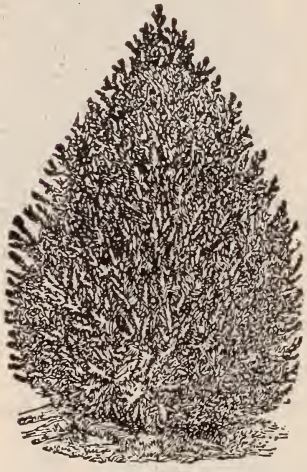
EVERGREEN TREES.

Evergreens are exceedingly difficult to transplant, and they should never be set in the fall. Even when planted in the spring, and under the most favorable circumstances, a large percentage are liable to fail. In the hands of amateurs, failure is almost certain in all cases. For this reason we do not like to sell evergreens, yet we can supply the varieties described below when desired. We cannot furnish sorts not named in this catalogue.

Arbor Vitæ (Thuja).

AMERICAN (Occidentalis)—A native variety, valuable for hedges. Stands shearing well.

GLOBE HEADED (*T. globosa*)—A dwarf round headed variety, quite pretty.



AMERICAN ARBOR VITÆ.

BALSAM FIR.

ARBOR VITÆ PYRAMADILIS.

HOVEY'S GOLDEN (Hovey)—A seedling from the American. Yellowish green foliage. Quite dwarfish.

PYRAMIDALIS—The most beautiful of all the Arbor Vitæ, having dark green, compact foliage and remarkably erect form; perfectly hardy.

SIBERIAN (Sibiricus)—The hardiest variety. Good for hedges and screens, and the best for single specimens on the lawn.

TOM THUMB—A very pretty dwarf variety of the American. Valuable for small enclosures or low hedges. Compact growth.

Ashberry (Mahonia).

HOLLY-LEAVED (Aquifolia)—Bright yellow flowers in May. Blush berries during the fall. Handsome foliage. Medium size.

Box.

COMMON TREE—From England. A handsome shrub with deep green foliage.

DWARF—The well known sort used for hedging.

Cypress (Cypressus).

LAWSON'S (Lawsonia)—Makes a large tree, with drooping branches and dark green foliage.

Fir (Picea).

BALSAM, or AMERICAN SILVER (Balsamea)—A very regular, symmetrical tree, assuming the conical form, even when young; leaves dark green above, silvery beneath.

NORDMANN'S SILVER FIR (Nordmanniana)—This majestic Fir, from the Crimean Mountains, is of symmetrical form, vigorous and quite hardy. Its foliage is massive, dark green, shining above and slightly glaucous below, rendering it a very handsome tree throughout the year. Considered here and in Europe as one of the finest of the Silver Firs.

SILVER FIR OF COLORADO—Without doubt the finest of the Rocky Mountain evergreens. Tree of graceful habit; broad, handsome foliage, bluish above, silvery beneath. A grand tree, very distinct and exceedingly rare as yet.

Juniper (Juniperus).

IRISH (Hibernica)—A small tree or shrub of conical shape, very erect and dense. Desirable for cemeteries.

Pine (Pinus).

MUGHO (Dwarf Mugho)—An upright, small, beautiful pine bush.

SCOTCH (Sylvestris) — A fine, robust, rapid growing tree, with stout, erect shoots and silvery-green foliage.

AUSTRIAN or BLACK (Austriaca) — A robust growing sort. Leaves long, stiff, dark green. Makes a large spreading tree.

Rhododendron.

Rhododendrons are superb evergreen shrubs, producing dense clusters of magnificent flowers, but they require a somewhat shady situation and a peaty soil, free from lime. There are several colors, the most attractive being withe, red, and purple, all of which we can supply.

Spruce (Abies).

COLORADO BLUE SPRUCE — A most beautiful variety discovered and disseminated from the Rocky Mountains, it is the nearest blue of any evergreen; very distinct in foliage and growth; fine, compact habit. In great demand as a lawn tree throughout the eastern states where fine specimens are established, proving it the best of all evergreen trees for the lawn. Foliage rich blue or sage color.

COLORADO BLUE SPRUCE.

CONCOLOR (one color)—A distinct variety with yellowish bark on young branches. Foliage long and light green. A handsome tree; none better.

DOUGLAS SPRUCE—From Colorado. Large conical form; spreading branches; horizontal; leaves light green above, glaucous below.

HEMLOCK (Canadensis)—Delicate, dark, colored foliage, and drooping branches. Good for the lawn, and also makes a good hedge.

NORWAY (Excelsa)—Of large and lofty appearance. Well adapted for large enclosures, and stands pruning well when used for hedges. It is exceedingly picturesque and beautiful; very popular and deservedly so.

AMERICAN WHITE—A tall tree, loose, spreading branches, and light green foliage.

Yew (Taxus).

ERECT ENGLISH—A very fine pyramidal variety of the English Yew, with dark green foliage. Hardy and desirable.

ELEGANTISSIMA—A beautiful tree of small, dense habit. Leaves striped with silver, frequently turning to light yellow.

WASHINGTONII—New, vigorous in growth and rich in healthy green and yellow foliage. One of the best.

HARDY FLOWERING SHRUBS.

We might extend our list of ornamental shrubs almost indefinitely, but as we desire to send out only the best of each class, we are necessarily confined to the following varieties. Our list is designed particularly for those who have small places, yet we feel confident that it embraces all the desirable kinds for the most extensive grounds. While we aim to give the merits of each one due attention, we do not intend to exaggerate in describing a single variety. We are positive that no one will meet with disappointment in selecting from our descriptions. Some of the very finest varieties are exceedingly ungainly when sent from the nursery, and customers must understand if one kind looks better than another when delivered, that it is not because we did not take as much pains with it in the nursery.

Althea or Rose of Sharon (Hibiscus).

The altheas have a well-deserved popularity. They are free growers, and not particular as to soil. They bloom in August and September, when but few other sorts are in blossom. They attain a height of from six to ten feet.

DOUBLE PURPLE (Purpurea fl. pleno).

DOUBLE RED (Rubra fl. pleno).

DOUBLE PINK.

VARIEGATED LEAVED (Fl. pleno fol. variegata)—Distinctly variegated leaves, white and green. Blossoms so late that in some sections the buds are killed by the first frost.

AZALEA.

Almond (Amygdalus).

The varieties which we name are hardy, charming shrubs, entirely covered in May with finely formed flowers. They attain a size of from three to four feet.

DOUBLE ROSE FLOWERING (Japonica fl. pl.)—A beautiful small shrub, producing in May, before the leaves appear, small, double, rose-like flowers, closely set on the branches.

DOUBLE WHITE FLOWERING (Japonica fl. alba pleno)—A pretty sort of small size, producing beautiful white flowers in May.

PRUNUS TRILOBA (Double Flowered Plum)—Native of China. A highly interesting and desirable addition to hardy shrubs; flowers double, of a delicate pink, upwards of an inch in diameter, thickly set on the long, slender branches; flowers in May.

Azalea.

HARDY GHENT—This class of Azaleas are sufficiently hardy for open air culture and will stand our winters without protection, though a mulching of straw or loose litter is desirable, at least until they become established. They are among the most beautiful of flowering shrubs, presenting the best effect where massed in beds. They require no other than an ordinary garden soil, with moderate fertilizing each year. Can be furnished in all colors.

MOLLIS—A splendid hardy species from Japan. One of the most valuable flowering shrubs. Flowers large and showy, like those of the Rhododendron, in fine trusses and of various colors.

PONTICA—A native of Asia Minor. A species growing three to four feet high, with small hairy leaves and yellow, orange and red flowers.

Barberry (Berberis).

PURPLE-LEAVED (Purpurea)—Foliage and fruit of a violet purple color, very striking. Attains a size of from three to five feet.

THUNBERGII (Japanese Barberry)—A most interesting and valuable shrub. Habit dwarf and spreading but delicate and shapely. Blooms in May, are white and a profusion of scarlet berries. Autumn foliage brilliant.

CANADENSIS—The common American species, forming a shrub with handsome, distinct foliage. Flowers yellow, from April to June, succeeded by red berries.

Calycanthus, or Sweet Scented Shrub (Florida).

Blooms in June, and at intervals through the summer. Flowers of a rare chocolate color; rich foliage. The wood and blossoms have a peculiarly agreeable flavor. Three to five feet high when fully grown.

Cornus (Dogwood).

The varieties which we describe are distinct and valuable.

ELEGANTISSIMA VARIEGATA—One of the finest variegated shrubs; of rapid growth. The leaves are broadly margined with white, while some are entirely white.

MASCULA (Cornelian Cherry)—A small tree, native of Europe, producing clusters of bright yellow flowers early in spring, before the leaves, followed by red berries.

RED SIBERIAN (Sibirica foliis alba-marginatis)—A remarkable shrub, of distinct merits. During the winter the bark is of a bright red color. The foliage is beautifully silvery margined. Grows to a height of from five to seven feet.

VARIEGATED CORNUS (Mascula variegata) — The flowers are bright yellow and are borne in clusters in early spring, before the leaves appear. The foliage is beautifully variegated with white. Makes a small shrub.

Currant (Ribes).

The flowering currants are well-known shrubs, and their hardiness, healthiness, and early season of blooming are desirable qualities. They attain a size of from four to six feet.

CRANDALL—A seedling from the west. Blooms profusely; bright yellow flowers; fruit of a red black color but poor quality.

YELLOW FLOWERING (Aureum) — Bright foliage, small yellow flowers, appearing in early spring.

CRIMSON FLOWERING (Sanguineum)—Small deep red flowers, blooming in early spring very abundantly.

Deutzia.

The deutzias are of Japanese origin, extremely hardy, luxuriant foliage, very attractive flowers, and very fine habit. All things considered, they have but few equals for the lawn.

DEUTZIA.

CANDIDISSIMA—One of the best. The flowers are snow white, of exquisite beauty and valuable for bouquets. Blooms in June. About five to six feet high when fully grown.

CRENATA—Double white flowers tinged with rose. Blooms the middle of June. Five feet high when fully grown.

GRACILIS—A graceful and charming shrub, with pure white flowers. Blooms the middle of June Two feet high when fully grown.

PRIDE OF ROCHESTER—One of the finest varieties, producing large double white flowers, the back of the petals slightly tinted with rose. It excels all of the older sorts in size of flower, profuseness of bloom and vigorous habit. Blooms early in June.

Elder (Sambucus).

Hardy, easily grown shrubs, and the new varieties are decidedly picturesque. They grow to be from four to six feet high.

GOLDEN (Aurea)—When they first appear the leaves are bright green, but if they are planted where they will have plenty of sun, they soon change to a golden green. The blossom, which resembles the common elder bloom, appears in

July. The best effect is produced when they are planted with other shrubs, that the foliage may be rendered more conspicuous by the contrast.

VARIEGATED-LEAVED (Variegata)—A rapid growing shrub, with foliage edged with yellow. Small white blossoms. Blooms in June. Very beautiful.

Eleagnus Longipes (Japanese Silver Thorn).

A remarkable new shrub from Japan. Foliage glossy, silvery tinge underneath, bark covered with peculiar brown spots which remain all winter. Flowers not large, but the bush is covered in July with large bright red berries which are edible and of a sprightly and agreeable flavor. Foliage remains good until late in autumn. A very desirable acquisition. (See cut.)

Exochorda.

GRANDIFLORA (Pearl Bush)—A vigorous growing shrub from China, forming a compact bush 10 to 12 feet high; can be trimmed into any desired shape. The flowers are borne in slender racemes of eight to ten florets each, on light and wiry branches that bend beneath their load of bloom just enough to be graceful. It is perfectly hardy; flowers pure white. Very useful for cut flowers.

ELEAGNUS LONGPIPES.

Filbert (Corylus).

PURPLE-LEAVED (*Purpurea*)—A very conspicuous shrub, with large, dark purple leaves; distinct and fine.

Forsythia.

Although not extensively planted, the Forsythias are worthy of attention. They make shrubs of about six to eight feet in height. Very beautiful.

VIRIDISSIMI—An elegant, hardy shrub. Bark and foliage a dark green color. Beautiful yellow flowers. Blooms in May before the leaves appear.

FORTUNEII—Growth upright, foliage deep green, flowers bright yellow. One of the best EARLY flowering shrubs, the flowers appearing before the leaves. Very hardy.

Fringe (Chionanthus).

The fringes are among the most popular and satisfactory large growing shrubs. They are very hardy, do well in most any soil, and when in bloom they call forth universal admiration.

PURPLE (Rhuscotinus)—Also known as Purple Mist, Smoke Tree and Smoke Plant. Covered during midsummer with loose panicles of curious hair or fringe-like flowers, giving it a mist-like and novel appearance.

WHITE (Virginica)—A superb shrub, attaining a size of form ten to twenty feet. Has a compact, roundish form, large, glossy leaves, and drooping racemes of pure white flowers. Blossoms in May and June. An entirely different plant from above.

Honeysuckle—Upright (Lonicera).

This species of shrub attains a height of from four to six feet.

FRAGRANT UPRIGHT (Fragrantissima)—A most desirable variety, with dark, almost

PANICULATA GRANDIFLORA.

evergreen foliage. Small, very fragrant flowers. Blooms in May, before the leaves form. A valuable shrub.

RED TARTARIAN (Tartarica rubra)—A well known sort. Blooms in May. Bright pink flowers.

WHITE TARTARIAN (Tartarica alba)—Like the preceding, except the flowers are a dull white color.

Hydrangea.

The addition of the Paniculata Grandiflora has given the hydrangea a high rank. Others of the new sorts are exceedingly beautiful and showy shrubs, but as they are not entirely hardy, we cannot recommend them as highly as we can the Paniculata Grandiflora.

OTAKSA—Foliage a deep green. Produces immense clusters of rose-colored flowers in profusion during July. A very free bloomer. Should be planted in tubs and stored in the cellar through the winter, and placed beneath trees or in some shady situation during the summer.

PANICULATA GRANDIFLORA—Absolutely hardy; thrives in all soils; grows rapidly and blossoms profusely. The flowers are pure white, afterward changing to pink, and are borne in large pyramidal trusses, often more than a foot long and six to eight inches in diameter. Begins to bloom early in August, and continues in bloom for several weeks. Wherever known, it is conceded to be one of the finest flowering shrubs cultivated. It is equally valuable for planting singly or massing in beds. We heartily commend it to all lovers of the beautiful. It will give great satisfaction. Attains a height of from three to five feet. Should be headed-in every spring.

JAPAN QUINCE.

RED BRANCHED (Ramulis' Loccineis)—A free-blooming variety producing large, well-formed trusses of deep rose-colored flowers; branches dark red.

THOMAS HOGG—May be planted in the open ground if slightly protected during the winter. It blossoms from July until September. The flower is pure white. A free bloomer.

Japan Quince.

CYDONIA JAPONICA—One of the best known shrubs in cultivation. Very ornamental in early spring, as its bright scarlet flowers completely cover the branches before the leaves are formed. Makes a good hedge.

Lilac (Syringa.)

Lilacs are too well known to need an extended description. They are hardy, free-blooming shrubs.

CHARLES X—A strong growing sort; large, loose clusters of purple flowers; an improved variety of the foregoing.

CHINESE WHITE—Growth similar to Persian, but blooms nearer white.

CHINESE WEEPING (Ligustrina Perkinensis Pendula)—Grafted on straight stems; forms a drooping, graceful habit; blossoms white and fragrant.

FRAU DAMMANN—Immense. Panicles of pure white flowers of very large size. Best white variety.

JAPAN TREE LILAC (Syringa Japonica)—A species from Japan. Leaves thick, pointed, leathery and dark; flowers in very large panicles, creamy white and privet like. Makes a small tree and is desirable because of its distinct foliage and late blooming.

JOSIKA or CHIONONTHUS LEAVED—Thick shining leaves and clusters of purple flowers; much later than common lilacs.

LAMARCK—Very large panicle; individual flowers large, very double, rosy lilac.

LUDWIG SPÆTH—Panicle long ; individual flowers large. Single ; dark purplish red. The finest of its color.

MARIE LEGRAYE—Large panicles with pure white flowers. A valuable variety for forcing.

PURPLE (Purpura)—Blossoms early ; abundant ; reddish purple and fragrant.

PERSIAN—Attains a height of from four to six feet ; small foliage ; flowers bright purple. A native of Persia and a decided acquisition.

Lilac (New Varieties).

PRESIDENT GREVY—A new variety ; strong grower ; blossoms in very large clusters of semi-double bluish flowers ; one of the best.

ROUEN or RED LILAC (Rathomagensis)—A distinct hybrid variety with reddish flowers ; panicles of great size and very abundant.

VILLOSA—A new Japanese variety ; flowers large, light purple in bud, white when open ; fragrant ; very late bloomer

WHITE (Alba)—Blossoms early. Pure white and very fragrant.

Plum (Prunus).

With the addition of Prunus Pissardii, the following plums are entitled to lavish praise as highly attractive and desirable shrubs.

PRUNUS PISSARDII (Purple-leaved)—A splendid novelty from Persia. It is a perfectly hardy, small-sized tree or shrub, of elegant appearance. The bark is black, and the leaves a rich purple, gorgeous to behold, retaining their bright color through the entire season. The ends of the growing shoots are brilliant red. Makes a small tree. Should be severely pruned

PRUNUS TRILOBA (Double flowering)—A very pretty little shrub, hardy and desirable. The flowers are upwards of an inch in diameter, semi-double, of a delicate pink color, appearing in May, and completely covering the branches.

Privet (Ligustrum).

Used chiefly for hedging, but the varieties we describe deserve prominent positions in the lawn as highly ornamental shrubs.

CHINESE PRIVET—A valuable new shrub, native of China and Japan. Flowers large, white, very fragrant, produced in great profusion ; leaves long and shining ; one of the hardiest of the Privets, and distinct. A charming shrub which will be prized for its fragrant flowers, as well as for its handsome foliage.

CALIFORNIA (Ovalifolium)—Of great value as a hedge, and of such positive beauty as to be attractive when grouped with other shrubs. When planted singly it forms a very compact, dense, upright shrub, of medium size. The leaves are so glossy as to have the appearance of having been freshly varnished. The foliage hangs on until late in the winter, making it nearly evergreen.

VARIEGATED-LEAVED (Ovalifolium aureum)—The foliage is distinctly bordered with golden yellow giving the entire shrub an appearance of brilliancy seldom seen in other shrubs. Of great value for the lawn or hedge. Makes a medium sized shrub.

Strawberry Tree or Burning Bush (Euonymus).

Also called spindle tree. A very showy shrub. Its chief beauty consists in its bright red berries, hanging in graceful clusters from the end of the branches until midwinter. Grows to be from six to eight feet high.

Syringa, or Mock Orange (Philadelphus).

Well known and formerly in great demand. The Golden-Leaved should be in every collection.

GARLAND (Coronaria)—A well known, hardy shrub. White, fragrant flowers. Blooms in June. Makes a large shrub.

GOLDEN-LEAVED (Foliis aureis)—A small shrub of positive and striking beauty. The foliage is golden yellow, and retains its lovely color through the entire season. When set with other shrubs the contrast is very pleasing. White flowers. Blooms in June. Very hardy.

Spirea.

The varieties which we catalogue are exceedingly fine and interesting shrubs. They are hardy, easily grown, and as they bloom at different periods one may have flowers all summer by planting the entire list. They are all of low growth and require but small space.

ANTHONY WATERER—A new dwarf compact-growing shrub. Blossoms in broad, flat heads of beautiful deep red color. A perpetual bloomer.

AUREA—A striking variety of decided beauty. The leaves are bordered with golden yellow, giving it a picturesque appearance, particularly in June, when the branches are covered with small double white flowers.

SPIREA ANTHONY WATERER.

BILLARDI—Blooms nearly all summer; rose colored; fine; showy.

CALLOSA — Desirable because it blooms nearly all summer. The flowers are rose-colored, borne in panicles. A very free grower.

GOLDEN-LEAVED (Opulifolia aurea)—An interesting variety, with golden yellow foliage, and tinted flowers in June. Very conspicuous. Strong grower and distinct.

PRUNIFOLIA — This sort deserves great praise. It begins to bloom in May, and the branches are covered for several weeks with its pure white, daisy-like flowers. Very hardy. Of dwarfish habit. One of the very best

REEVESI—Narrow, pointed leaves. The flowers are white, quite large, and borne in clusters, entirely covering the whole plant. Blooms in June.

THUNBERG'S (Thunbergii)—A Japanese species of small size, with narrow linear leaves and small white flowers; one of the best.

VAN HOUTTEI—The finest of all Spiræas, a most charming and beautiful shrub; having pure white flowers in clusters. Extraordinarily profuse in bloom, and the plant is a vigorous grower and very hardy.

Snowball (Viburnum).

COMMON SNOWBALL (Sterilis)—A popular shrub. Makes a large bush. Bears balls of pure white flowers in June.

PLICATUM OR JAPAN SNOWBALL — Handsome plicated leaves; globular heads of pure white neutral flowers, early in June. It surpasses the common variety in several respects. Its habit is better, foliage much handsomer, flowers whiter and more delicate. One of the most valuable flowering shrubs. (See cut.)

PRUNIFOLIA.

Sumac (Rhus).

FERN-LEAVED (Laciniata)—A hardy plant of moderate size with large beautiful fern-like leaves, milky white on under side, changing to a brilliant scarlet in autumn.

STAGHORN—A large shrub or tree, brilliant foliage and scarlet fruit in autumn.

Symphoricarpus. St. Peter's Wort or Waxberry.

RACEMOSUS—Snowberry. A well known shrub with small, pink flowers and large, white berries that hang on the plant through part of the winter.

VULGARIS—Red-fruited or Indian currant. A shrub of very pretty habit. Foliage flowers and fruit small; fruit purple, and hangs all winter.

Tamarix.

AFRICAN (Africana)—Of great value for planting by the seaside. It may be depended upon to thrive in any soil. The foliage is handsome. The flowers are small, born in spikes in May. Its habits are upright, and it forms a pretty shrub of medium size.

SNOWBALL.

Weigela (Diervilla).

Of Japanese origin, producing in June and July superb large trumpet shaped flowers, of various colors, from the purest white to the richest red; very ornamental in the fall.

ALBA—One of the finest plants in the spring, very hardy, and a rapid grower; flowers white.

CANDIDA — It is of vigorous habit, an erect grower becoming in time a large sized shrub; flowers pure white and produced in great profusion in June and the plants continue to bloom during the summer.

WEIGELA.

FLORIBUNDA — Of erect habit. Dark reddish purple. One of the best. A compact, slender grower, flowers medium, outside dark red with lighter center.

ROSEA—The best known sort. From China. Rose-colored, trumpet-shaped flowers. Blooms in June. Four to six feet.

SEIBOLDI ALBA MAGINATA—An upright grower, young leaves variegated yellow changing to silvery white; flowers rose colored.

VAN HOUTTEI—New, rare, and valuable. Pure white flowers, in clusters of about one inch in diameter. Blooms in June.

VARIEGATED-LEAVED (Foliis variegatis)—Leaves bordered with yellowish white, making the bush very conspicuous the entire season. Pink flowers blooming in June. A very desirable shrub.

HARDY CLIMBING VINES.

Ornamentals of this class are so hardy, so easily grown, and so beautiful, that they deserve greater attention than they receive. No artist can produce pictures equal to the wealth of beauty displayed by the elegant wistaria, the graceful honeysuckle, or the charming and magnificient clematis when in the glory of full bloom, and there is nothing in art that will in any degree compare with the gorgeous hues of the ampelopsis after it assumes its brilliant autumnal tints.

Ampelopsis.

AMERICAN IVY, or VIRGINIA CREEPER (Quinquefolio)—Also called Woodbine. A very rapid grower, having beautiful, dark green foliage; assumes rich crimson hues in autumn.

VEITCHII, or BOSTON IVY—Leaves a little smaller and more ivy like inform than the foregoing. Overlapping each other, they form a dense sheet of green. The plant requires a little protection the first winter until it is established, but after that it

may be safely left to care for itself. It grows rapidly and clings to the surface of even a painted brick wall with great tenacity. The foliage changes to crimson scarlet in autumn.

Aristolochia (Dutchman's pipe).

SYPHO—A rapid-growing vine, with magnificient foliage, ten to twelve inches in diameter, and curious pipe-shaped, yellowish-brown flowers.

Chinese Matrimony Vine (Lycium Sinensis).

A vigorous climber, branching freely, and covered with bright purple, star-shaped flowers, succeeded by brilliant scarlet berries almost an inch long ; the contrast between the glossy, dark green foliage and shining scarlet fruit being exceedingly beautiful. Flowers and fruit continue forming throughout summer, when the fruit ripens and remains on the vine until winter. Of the easiest culture, thrives everywhere and in any soil.

Honeysuckle (Lonicera).

CANADIAN—A very robust, rapid grower, with large glaucous leaves and yellow flowers.

CHINESE TWINING (Japonica)—A well-known vine, holding its foliage nearly all winter. Blooms in July and September and is very sweet.

HALL'S JAPAN (Halliana)—A strong, vigorous, evergreen variety, with pure white flowers changing to yellow. Very fragrant; covered with flowers from June to November.

MONTHLY FRAGRANT (Belgica)—Blooms all summer. Flowers red and yellow. Very sweet.

SCARLET TRUMPET (Sempervirens)—A strong grower, and produces scarlet inodorous flowers all summer.

WISTARIA.

Ivy (Hedera).

The evergreen ivies often suffer in winter if exposed to the sun, and should therefore, be planted on the north side of the wall or building.

ENGLISH (Helix)—A well-known old and popular sort.

VARIEGATED-LEAVED (Fol. variegata)—With smaller leaves than the preceding, variegated with white.

Trumpet Vine (Bignonia radicans).

A splendid climber, vigorous and hardy, with clusters of large, trumpet-shaped scarlet flowers in August.

Wistaria (Glycine).

CHINESE PURPLE (Chinensis purpurea)—One of the most elegant climbing vines known, and a very rapid grower after it gets thoroughly established, sometimes making twenty feet of wood in a single season. Bears long clusters of pale blue flowers in May and June, and also in September. Extremely hardy. Attains a larger size than any other climber.

CHINESE WHITE (Chinensis alba)—Habit of growth similar to Chinese Purple, but the flowers are somewhat smaller and pure white. Blooms in June and Sept.

CLEMATIS JACKMANNI.

CLEMATIS.

Although of recent introduction, the finer varieties of clematis are to-day preëminently the most showy and effective of all the hardy flowering climbing vines known, so far as richness of color and elegance of form of the flower is concerned. Nothing can excel the surpassing beauty of the many colors of the several varieties. They are peculiarly adapted for covering pillars, trellises, walls, fences, rocks, etc., their exceedingly rapid growth (making from ten to twelve feet of vine in a single season) rendering them especially valuable for hiding from view any unsightly object. They are equally efficient when used as a bedding plant, covering a bed very quickly if pegged down occasionally. All of the varieties offered by us are entirely hardy, most of them are lavish bloomers, and the majority blossom the first season after transplanting. We deliver only a small root.

Coccinea (Leather Flower)—A curious bell-shape heavy petaled flower, borne in profusion for a long season, color bright scarlet.

Henryi—Fine bloomer ; flowers large, of a beautiful creamy white, consisting generally of from six to eight sepals. June to October.

Imperatrice Eugenie—Produces flowers profusely, which are of large size and pure white. June to October.

Jackmanni—This is the variety upon which Mr. Jackman bestowed his name. It is better known than any other, and still stands as one of the best. It is a strong grower and produces a mass of intense violet purple flowers from June to Oct.

Kermesina Splendida—This is the most profuse bloomer of all the clematis, commencing in early summer and continuing through the season, literally covered with scarlet-crimson flowers. Not subject to blight, and is a vigorous grower.

Madame Edward Andre—Flowers large, of a beautiful bright velvety red, very free flowering and continuous bloomer.

Paniculata—A great novelty from Japan. One of the most desirable, useful, and beautiful of hardy garden vines, a luxuriant grower, profuse bloomer, with fine foliage. Flowers of medium size, very pretty and fragrant, produced in the greatest profusion in late summer.

Ramona—A new American seedling clematis. It is a strong, rampant grower, we think fully three times stronger than the Jackmanni, and is very hardy. It is a free and perpetual blooming variety, both on the old year's growth and also on the wood of the current year ; the color of the flower is a deep sky-blue, and very attractive ; the size of the flower is larger than any variety we ever saw, very many flowers running from five to seven inches in diameter, and as large as eighteen inches in circumference.

Viticella Rubra Grandiflora—Should be in every collection. A fine bloomer. Flowers large, handsome, and of a rich claret red color. July to October.

DOUBLE VARIETIES.

Duchess of Edinburgh—This is without doubt the best of the double pure whites. Deliciously scented.

Lucie Lemoine—Flowers white, double, large, and well formed. Very showy. Blooms only in spring.

CLEMATIS PANICULATA.

HEDGE PLANTS.

To plant hedges of evergreens, when plants are two feet high or over, no previous special preparation is necessary, only that the ground is reasonably upland enough to be suitable for hedge purposes. Plow with two horses a furrow along where the hedge is to be planted and then plow back along same furrow, throwing out, and leaving a ridge of about six inches in the centre of the dead furrow and then plow out the centre of dead furrow. Set a line so that it will come directly over said furrow at such a height as not to interfere with the workmen; then with spade throw out under the line deep enough so that plants will be two inches deeper than in nursery. Place plants 22 inches apart in the row putting mellow earth around the roots. If ground is hard clay, sand must be drawn, and two or three shovelsful put around the roots of each plant and then fill up with soil. Keep well cultivated first two or three seasons and if dry weather, should be watered occasionally. By this method a spruce hedge can be set, even after removing an old fence, without previous preparation.

Plant Evergreens when 12 to 18 inches high, about 9 inches apart; Honey Locust and Osage Orange in double rows, about 9 inches apart. Evergreens should be pruned in spring just before they commence growing.

American Arbor Vitæ—Forms a handsome ornamental hedge of fairly dense growth.

Buckthorn (Rhamnus)—A fine, robust, hardy shrub of European origin, with dark green foliage, white flowers and small, black fruit. A popular hedge plant.

Hemlock—Of graceful habit, and fine foliage, but not so hardy, nor adapted to all soils.

Honey Locust—By its vigorous growth, and thorny character makes a good cattle or farm hedge.

Japan Quince, Privet and Dwarf Box—All make elegant ornamental hedges.

Norway Spruce—With careful pruning may be kept low and in good shape, and grown in this shape is highly ornamental.

Scotch Pine, Austrian Pine, American Arbor Vitæ—All well adapted for planting in belts for wind-breaks.

Siberian Arbor Vitæ—Is of thrifty, compact growth, fine form, great hardihood, and a deep green color, which its foliage retains throughout the year. Considered by many the best for the purpose.

Tom Thumb Arbor Vitæ—For a low, ornamental hedge.

ROSES.

Nothing that we can say can add to the popularity of this most beautiful of all flowers. Those who appreciate the beauties of nature, prize roses above all things else in the ornamental line. While nearly all desire, and perhaps make an effort to have, an abundance of them in their season, yet very many fail; and the failure to succeed is usually due to planting inferior bushes, thousands of which are sent out over the country every year at very low prices. Our roses cost more than the weak, puny, hot-house plants referred to, yet the results show that we give our customers as much for their money as any firm in the country. Our bushes are grown out-of-doors, in ordinary soil, and are as hardy and vigorous as it is possible to make them. When properly planted and cared for, they give perfect satisfaction. If the amount of bloom is not as great as is desired, all that is necessary is to fertilize freely and apply the pruning knife a little more freely the following spring, and this will insure an abundant growth of new wood, and it is the new wood that yields the bloom.

How to grow them—They succeed best in a deep, rich, clay loam soil. In preparing a rose bed or hedge, first, prepare the soil for your plants as follows: If in the lawn, and the ground is sodded over, remove the sod if the ground is a stiff clay, to the depth of four inches, the size you want your bed; spade up the ground to the depth of 15 inches thoroughly, then prepare a compost as follows: Two parts of leaf mold, one part sandy soil or leached ashes, one part good, well-rotted cow manure. Mix these thoroughly together and place six inches deep of this mixture on top of your bed. Spade it in thoroughly, mixing into the ground. If your ground is sandy use the same amount of clay loam and cow manure. If it is a clay loam use leaf mould two parts,

and cow manure one part, and proceed the same as above; if it is a muck and the ground is well drained, use a liberal amount of well rotted cow or horse manure. Remember that the manure must be well rotted and mixed thoroughly through the soil. Green manure must never be used, as it will kill the plants if it comes in contact with the roots. Never set your roses in a low wet place, the ground must be thoroughly drained if it is low, although roses respond delightfully to a free application of water from the hydrant and cannot be grown perfectly without it. Roses should be cultivated if you wish to reach the perfection line. Never plant roses under the overhanging boughs of a tree. If possible get a location where your roses will have some protection from the cold westerly winds either from buildings, board-fence or hedge if you want a first-class rosary; while the most of the Hybrid Perpetuals are hardy, they are much better with a little protection. Always get the best stock that can be procured.

How to plant—When your roses come, place them in soft water twenty-four hours before setting; prune off all the broken roots. Plant your roses 2½ feet apart. If set in rose beds 2 feet; in hedge, if set two rows side by side, 2½ by 3½ feet. This will give you ample room to cultivate them. When setting be careful to straighten out the roots and press the dirt well around them with foot or hands. Set them as deep as they grow in the nursery. You can tell by the dark earth-line on the rose stalk. Budded roses should be set with the bud 4 inches under the ground. After setting cut the tops off the weak plants 6 inches from the ground, and the strong plants 8 inches, either fall or spring setting. If it is in the spring cover the top of your bed 1½ inches deep with good rotted manure, so when you use the hydrant on your roses you will be feeding the plant liquid manure, which gives your roses the most beautiful lustre. If it is a fall set, after cutting the tops off, hoe the dirt up around your stalk three or four inches, and before cold weather sets in, or about the time, hoe the dirt around them clear up to the top, and press around the plants, then cover three or four inches deep with good horse manure from the stable, which should have plenty of straw in it; leave this on all winter. When spring comes in March or April, owing to the earliness of the spring, remove all the manure and level up your bed; put two inches of this manure on top of your rose bed, shaking out all of the straw; dig this into the ground with manure fork. If you have no hydrant, put the manure, without shaking out the straw, on top of the bed to keep the ground moist. Use all of the soapsuds made from washings on your roses, as it is an excellent fertilizer and is good for them. Kerosene emulsion should be used on the roses as soon as the leaves are the size of your little finger nail; spray them once a week and oftener if it rains much. Spray under the leaves as well as on top. This will keep your roses free from all insects. Never use poison on your roses as it is dangerous; some people have a mania for eating them. If you have the hydrant you need never have an insect to harm your bushes. As soon as your bushes begin to show leaves nicely (size of your little finger nail) use your hydrant every night on them; turn down the stream so it is like rain, giving the full force of the stream. Use this on your bushes and wash them for two minutes every evening, it will wash off all larvæ so there will be none there to hatch. By doing this every night the leaves get accustomed to the water and they will bloom freely, giving you a beautiful supply of the gorgeous beauties. Roses should be pruned in March and about the last of June, When you prune in March, for the first three years cut the weak shoots back two-thirds. the strong shoots one-half. After that level up your bush; by that time your rose should be established if you have grown it properly. Cut out the old canes, as they get scrubby, close to the ground to give place to the strong new shoots. Experience is the best teacher. Young shoots, if thrifty and strong, can be made to bloom in August if cut off in the latter part of June. This checks their growth, and as the wood hardens it will throw out side shoots, which will give you the most beautiful roses of the season. Clip off the ends of your bushes six to eight inches the middle of June or first of July. Those that have no roses on cut off six or eight inches and it will soon throw out another shoot filled with buds. Roses should have a good coat of rotten manure every fall, and worked into the ground every spring. They should be kept clean from weeds or grass by cultivation.

Insects—For the aphis syringe the plants daily with a tobacco solution, one pound of tobacco stems to five gallons of water. Rose bugs which work at the flowers must be picked off. The rose caterpillar glues two or more leaves together to form a shelter; press these leaves together with the thumb and finger. Insects which eat the leaves can be destroyed by applying white hellebore when the foliage is damp. For thrips and aphides a spraying or wash of whale oil soap will be effective.

HYBRID PERPETUAL ROSES.

With the care noted above these roses will produce a succession of bloom from June till frost, produce new wood constantly and the bloom is assured. They are perfectly hardy and will endure the winter unprotected ; but will produce a greater abundance of early flowers if somewhat protected. They should be severely pruned in the spring before the buds start.

CLIO.

Alfred Colomb—Bright carmine red ; clear color, large, deeply built form ; exceedingly fine.

American Beauty—This valuable rose is of American origin, being introduced by a Washington florist. It is equally valuable for forcing or for open-air culture. The flowers are a deep crimson color, of very large size, and the most fragrant of its class. It is a continuous bloomer. Should be protected in winter.

Anne de Diesbach — Brilliant, crimson, sometimes shaded with bright maroon A superb garden sort ; fragrant ; one of the hardiest and best.

Baronne de Bonstetten—Rich, dark red, passing to velvety maroon, highly fragrant. Very double.

Baronne Prevost—Deep rose; very large and full ; a vigorous grower and abundant bloomer.

Baroness Rothschild—Light pink, cupped form, very symmetrical, without fragrance, very beautiful. A moderate grower only.

Caroline de Sansal—Clear, delicate flesh color, becoming blush ; magnificent variety ; the best rose of its color in the catalogue, surpassing even the Victoria, which is very similar in color ; growth vigorous and foliage luxuriant.

Charles Lefebvre—Reddish crimson, velvety and rich; large and full. A splendid rose.

Coquette des Alpes—White, shaded with carmine ; small flowers blooming in clusters. A continuous bloomer. One of the best and most satisfactory. Fragrant.

Climbing Jules Margottin—Carmine rose, fine in open flower or bud. It may be grown as a pillar rose, or by pruning, kept in bush form.

Clio—New. Flesh color shaded in center with rosy pink. Flowers large, of fine globular form ; handsome foliage. One of the finest new roses.

Fisher Holmes—One of the choicest of perpetual roses. Bush is vigorous and produces freely of superb blossoms. Color brilliant carmine crimson.

Francois Levet—Cherry red ; medium size, well formed ; very free bloomer.

Francois Michelon—Brilliant carmine, shaded with crimson ; very large, full and of fine globular form ; very fragrant and a free bloomer, late in June and July.

General Jacqueminot—Brilliant crimson, large and very fine, one of the handsomest and most showy roses of this color. Beautiful in the bud ; semi-double when full blown. Of fine free growth ; a universal favorite.

General Washington—Bright red, with crimson shade ; large, flat form.

John Hopper—Rose, with rosy crimson center ; splendid form.

Jules Margottin — Light, brilliant crimson ; large, full and beautiful.

La France—Delicate silvery rose ; very large and full ; an almost constant bloomer, equal in delicacy to a Tea rose ; the most pleasing fragrance of all roses ; a moderate grower ; semi-hardy.

LA FRANCE.

La Reine—Bright rosy pink ; very large, double and sweet ; one of the best.

Lord Raglan—Fiery crimson, shaded with purple; large and finely formed. A superb rose and a vigorous grower.

Louis Van Houtte—Beautiful maroon ; medium size ; full, of fine shape ; deliciously perfumed.

Madam Caroline Testout—Silvery rose, flowers large, double.

Madame La Charme — White, sometimes faintly shaded with pink, moderately large. A free bloomer in spring.

Mabel Morrison—A sport from *Baroness Rothschild.* White, changing to pure white ; in the autumn tinged with rose ; double, cup-shaped flowers, freely produced. In all, save substance of petal and color, this variety is identical with *Baroness Rothschild.*

PRINCE CAMILLE DE ROHAN.

Madame Charles Wood—The flowers extra large, full and double ; color deep rosy crimson, sometimes brilliant scarlet with maroon shading ; a constant and profuse bloomer.

Madame Gabriel Luizet—A magnificent pink rose , has often been awarded the first premium at rose exhibitions ; very large, and possesses a pleasing fragrance. Known as Hardy LaFrance which it resembles.

Magna Charta—Bright pink, suffused with carmine ; very large, full and fragrant, with magnificent foliage. A free bloomer.

Marchioness of Londondery — A new white rose. Flowers of great size, perfectly formed on stout stems. Color ivory white ; free blooming and highly perfumed.

Margaret Dickson—Of magnificent form ; white, with pale flesh center ; petals very large, shell shaped, and of great substance ; fragrant, a fine variety ; foliage very large, dark green.

Marshall P. Wilder—New, color cherry carmine ; continues in bloom long after other varieties are out of flower ; the finest H. P. rose yet produced.

Mrs. John Laing—A seedling from Francois Michelon ; soft pink ; large and of fine form, produced on strong stems ; exceedingly fragrant ; one of the most valuable varieties for forcing, and flowers continuously in the open ground. The most beautiful rose of recent introduction.

Paul Neyron—Deep rose color ; good foliage ; by far the largest variety in cultivation.

Pierre Notting—Deep velvety crimson. A beautiful, globular-shaped flower, distinct and fine.

Pius the Ninth—Bright purplish red, changing to violet. Very large and full; robust and profuse bloomer; one of the best.

Prince Camille de Rohan—Deep velvety crimson, large, moderately full. A splendid rose.

Ulrich Brunner—Raised from Paul Neyron. Brilliant cherry red, a very effective color; flowers of fine form and finish, carried well upon the plant; petals of great substance; plant vigorous, hardy, and resists mildew. One of the best varieties for forcing and open air culture.

Vick's Caprice—A strong-growing variety, with petals beautifully striped pink and white; a decided novelty.

Victor Verdier—Clear rose, globular, fine form and free bloomer; superb.

White La France (Augustine Guinoisseau)—This magnificent new rose is a pure white La France, having just a breath of rose-tinted blush, decidedly clouding the depths of its broad petals; the buds and flowers are extra large, very full and finely formed; the fragrance is delicious. It is a free, continnous bloomer.

CLIMBING ROSES.

These are all hardy, vigorous growers, and bloom freely in June.

Baltimore Belle—Fine white with blush center; very full and double.

Climbing Jules Margottin—Carmine-rose, lightened with pink; full flowers of medium size, very pretty in bud. This is a decided acquisition; the flowers are the same as in the old variety, except that they are a little smaller, and quite as freely produced; the growth is more vigorous.

Climbing Victor Verdier—Rosy carmine, purplish edges; showy and very effective.

Crimson Rambler (Japanese)—This wonderful rose has been thoroughly tried in all situations and has proved to be all that could be claimed for a new introduction, and it has far surpassed all that was hoped for it. As a climbing or running rose it has no equal. The foliage is rich, dark green, the growth rapid and diverse, but its great beauty is when the plant is covered with a profusion of the brightest crimson partly doubled flowers which remain on a long time, thus prolonging the term of its magnificence.

Dorothy Perkins—This is a splendid new, shell-pink Climbing Rose. It attracted much attention at the Pan-America Exposition where a bed of fourteen-months-old plants produced a show of bloom unequaled by any other variety, unless it was the famous Crimson Rambler. This new rose is of the same strong habit of growth as Crimson Rambler, and the flowers are borne in clusters of 30 or 40 and sometimes even 50 to 60. The flowers are large for a rose of this class, very double, sweetly scented and of a beautiful shell pink, a color that is almost impossible to accurately represent by lithography. Raised from seed of Rosa Wichuriana crossed with that grand old rose Mme. Gabriel Luizet. Absolutely hardy. Mr. Wm. Scott, the Ass't Supt. of Horticulture at the Pan-American says regarding the DOROTHY PERKINS: "This has exactly the habit of the well known Crimson Rambler. It has flowered splendidly and has been very brilliant. This seems to me to be a great acquisition, and I believe it to be a good forcing rose. The individual flower is larger than the Crimson Rambler, but it is a beautiful shell-pink in color."

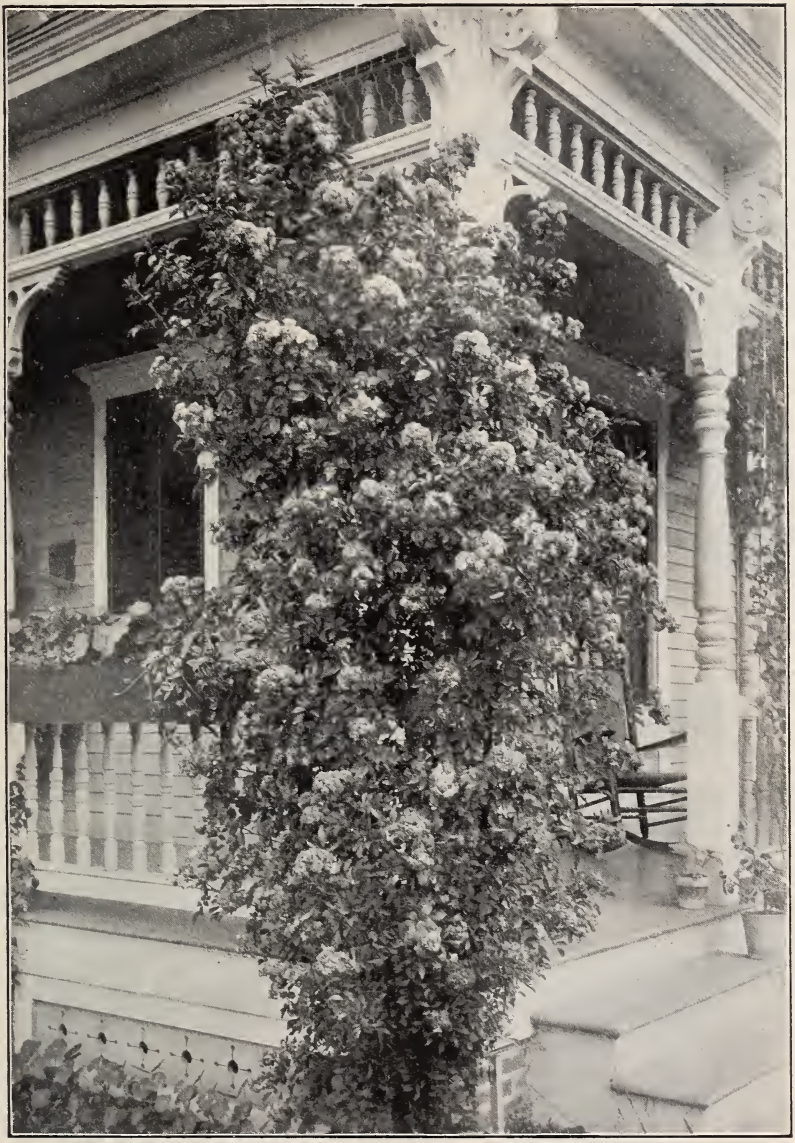
Gem of the Prairie—A hybrid between the Queen of Prairie and Madam Laffay. It is a strong and vigorous grower, similar in habit to the Queen, but the flowers are considerably darker in color, besides being quite fragrant. New and a great acquisition.

Pink Rambler (Enphrosyne)—Possesses the same valuable features found in the White Rambler, with which it differs only in color of flower, which is a brilliant light carmine.

Queen of the Prairie—Bright rose color; large, compact, and globular; a very profuse bloomer. One of the best.

Seven Sisters—Large clusters of bloom, shaded to dark red.

White Rambler (Thalia)—Flowers are the size of a silver quarter, perfectly filled, very fragrant. Color pure white, sometimes tinged with blush. Blooms in clusters.



CRIMSON RAMBLER.

Yellow Rambler—(Aglaia)—A new climbing rose of the class and habit of the famous crimson rambler ; flowers medium size, cup shape, nearly full, sweet scented; blooms in large clusters ; color very light yellow.

CRESTED MOSS.

MOSS ROSES.

Ætna—Bright crimson, very double ; superb.

Blanche Moreau—Pure white, large ; form very perfect ; flowers in clusters, heavily mossed. A rampant grower.

Blanche Robert—One of the finest and most desirable of the white moss roses ; it is very strong in growth, and a great bloomer, flowers very large and handsome; it is also hardy.

Countess of Murinais—White, slightly tinged with flesh. The best white moss.

Crested—Rose ; beautiful and curious mossy fringed calyx. Finest of all for buds.

Glory of Mosses—Pale rose, very large, full and beautiful.

Princess Adelaide—Blush, becoming quite pale ; very double and well formed, the most vigorous grower of all the Mosses.

Perpetual White — Pure white blooms in large clusters. Very mossy bud.

Salet Clear rose color, very double, of vigorous growth and abundant bloom; perpetual.

EVER-BLOOMING TENDER ROSES.

These are frequently classed as Bourbon, Noisette and Tea Roses. They may be kept over winter outdoors by giving them sufficient protection. They are free and constant bloomers, and the Tea Roses, especially, are exceedingly fragrant.

Aggrippina—Rich velvety crimson, of dwarf habit. Suitable for beds.

Augusta—Sulphur yellow, large and full, very fragrant, strong grower ; similar to, if not identical with, Solfaterre.

Bon Silene—An old rose, but unsurpassed for beauty of its buds. Light rose, sometimes rosy crimson.

Bride—Pure white, large, fine. Very fragrant.

Bridesmaid—Pink, rich color.

Duchess of Edinburgh (Bengal.)—Crimson bud changing light as it opens.

Duchess de Brabant—Rosy pink, edged with silver ; large ; semi-double ; fine ; fragrant.

Glorie de Dijon—Combined colors of rose, salmon and yellow ; large,full, globular ; hardiest of Teas.

Hermosa—Light blush or flesh color ; large,full and double ; grows freely and blooms profusely ; fine.

Louis Margottin—Delicate satin rose, fine form ; a free bloomer.

Marechal Niel—Very bright, rich, golden yellow ; very large, full and perfect form ; the petals are extra large and of good substance ; of vigorous growth and a free bloomer. This is unquestionably the finest of all Tea Roses. Truly magnificent.

Madame Bravay—White, with rose center, large and fine.

Niphetos—This is the white rose *par excellence*, being unequalled for winter forcing and also excellent for summer flowering. Every shoot produces a bud, which is long and pointed, and white as snow.

Papa Gontier—Cherry red and glowing crimson; large size; constant bloomer; a fine rose for all purposes.

Perle des Jardins—No rose of its color ever cultivated for cut flowers up to the present time is now so valuable as this. Tens of thousands of it, covering many acres in glass, are now grown in the vicinity of New York for winter flowering; it is equally valuable for summer, as it flowers continuously. Its color is a rich shade of yellow; large size and perfect form, tea fragrance, a healthy, free grower, and unequalled in profusion of bloom, either in the greenhouse in winter or in the open ground in summer.

NIPHETOS.

Safrano—Fawn, shaded with rose.

Souvenir de Malmaison—Pale flesh color, with fawn shade, very large, full, beautiful.

Sunset—This new rose will eventually supersede many of the older winter-blooming varieties owing to its productiveness and richness of both foliage and flower; color rich tawny shade of saffron and orange; in habit, identical with the well known Perle des Jardins.

Triomphe de Luxembourg—Salmon buff, shaded with deep rose; distinct and fine.

Wm. Francis Bennett (*New Crimson Tea Rose*)—This rose is worthy of all the praise bestowed on it, and for years to come will maintain its high position. For cutting it is without an equal, the buds being effective in color, of large size, and

RUGOSA OR JAPANESE ROSE.

borne on long stems. In shape the flowers resemble Niphetos, rival in coloring the rich glowing crimson of Gen. Jacquimenot, and resemble in fragrance the lovely La France. The habit is all that can be desired, being clean, vigorous and productive.

Yellow Tea—An old and popular rose ; very fragrant, straw color ; very fine bud.

Madam Georges Bruant—Buds long and pointed, semi-double when open, white and fragrant, borne in clusters through the season ; vigorous and hardy.

Rugosa Alba—Single, pure white, having five petals and highly scented.

Rugosa Rubra—Single, bright rosy crimson suceeeded by large brilliant berries of much beauty.

SUMMER ROSES.

These bloom but once in early summer. They are hardy.

Harrison's Yellow—Not so durable as Persian Yellow ; bright yellow ; very showy and fine.

Madame Plantier—One of the finest pure white roses, blooming in clusters.

Persian Yellow—Deep golden yellow ; double and very fine.

TREE ROSES.

These are grafted on tall stems of the Dog Rose, forming a half weeping head three or four feet from the ground. They can be furnished by colors only ; but the particular varieties grafted in the head cannot be named. Orders must be by *color* only.

PAEONIAS.

A splendid class of shrubs, flowering in all shades, from red and lilac to white, with blooms from four to eight inches in diameter. Many of them are very double, and have a delicate and refreshing fragrance ; they are easily cultivated and require but little protection.

TREE PÆONIAS.

Banksii—Rosy blush, with purplish center ; double and fine Makes a large slow growing shrub, which increases in bloom each year ; hardy and very desirable.

HERBACEOUS PÆONIAS.

These are very beautiful, showy, and easily cultivated plants, blooming from the beginning of May to the end of July. Sell by colors only. Flesh pink, red, scarlet, white.

MISCELLANEOUS BORDER AND HOUSE PLANTS.

We offer a fine assortment of the best varieties of these useful plants, which are exceedingly valuable on account of their hardiness, easy culture and showy appearance. Most of these will live all winter in the open ground, and bloom freely every year. We name our leading sorts :

Anemone Japonica.

A distinct and beautiful species ; flowers two and one-half inches in diameter ; bright purplish rose, with golden yellow centers ; borne in great profusion from September to November. Height, two and one-half feet, habit neat and compact ; very desirable and effective as a pot plant, and in lines or masses in beds or mixed borders.

Chrysanthemums.

The prettiest of late autumn and early winter flowering plants. In November and December there is nothing that will make such a cheerful display. Plant in pots and place them in the house where they will have the sun. The prevailing colors are white, yellow and red.

Dahlias.

The Dahlia is the grandest autumn flower we have. Nothing is its equal in any respect in September and October. It is in its glory when everything else is faded or fading, and surrenders only to the Frost King. Put Dahlia tubers in the ground when the season becomes warm, covering the neck some three inches. If many shoots start thin them out. After flowering, and before hard frosts, take up the plants, remove the tops, dry the bulbs a little, and put in the cellar until spring, when they can be divided and replanted. Look at them occasionally to see that they are not shriveling from too dry an atmosphere, nor starting the eye early in consequence of too much moisture and warmth.

Eulalia.

JAPONICA ZEBRINA—A most striking and distinct plant. Unlike most plants with variegated foliage the striping or marking is across the leaves instead of longitudinally, the leaves being striped every two or three inches by a band of yellow one-half inch wide. Late in the fall it is covered with flower spikes that resemble ostrich plumes in shape, which when cut and dried, make handsome ornaments for the house in winter. It is perfectly hardy and when once planted will increase in beauty from year to year. Should be in every collection.

Double Dahlias.

EULALIA JAPONICA ZEBRINA.

Golden Glow or Summer Chrysanthemum (RUDBECKIA).

A large showy plant, attaining in good soil a height of six to eight feet the same season planted. Flowers 3½ inches in diameter, double, well formed, and of a deep golden yellow color, resembling yellow Chrysanthemums, and borne on long stems which render them suitable for cutting. Plants bloom profusely from July till September. One of the best novelties in hardy flowering plants.

Hollyhocks.

A collection of fine double sorts, of several colors.

Hibiscus.

Valuable border plants, having handsome broad leaves and large showy blossoms. A general assortment.

Japanese Fern Ball.

This beautiful novelty from the Orient is a most decorative, plant. It is constructed of fern roots and moss; and upon frequent waterings the fern leaves

spring out from every point. The fern ball, which is furnished while dormant, is from six to eight inches in diameter.

Otaheite Orange.

The great beauty, novelty and popularity of this plant is, indeed wonderful. As a pot plant it can be trained into symmetrical forms, and with its dark green glossy foliage forms a most beautiful specimen. It blooms most freely during the winter, although it is likely to bloom at any and all times during the year. With one or two pots of it any one can raise an abundance of the far-famed and highly prized delicate and exquisitely fragrant orange blossoms. It is a dwarf orange which grows, blooms and fruits freely in pots, even when only six or eight inches in height. The fruit is about one-half the size of ordinary oranges. The blossoms are produced in great abundance, delicate and beautiful in color, and rich in delicious perfume. It is, beyond question, the most satisfactory plant for pot culture. It fruits immediately after flowering, and while not as fine flavored as the ordinary orange, is quite edible On a single plant, 20 inches high, as many as one hundred and sixty-four buds have been counted.

YUCCA.

Yucca.

ADAM'S NEEDLE—A handsome conspicuous plant, with long, narrow palm-like leaves and tall, upright stems, three to four feet high, bearing bell-shaped, creamy-white flowers in July.

SUMMER AND AUTUMN FLOWERING BULBS.

THAT REQUIRE TAKING UP IN THE FALL, AND TO BE KEPT FROM FREEZING.

Amaryllis.

FORMOSISSIMA (Jacobean Lily)—Flowers large, deep red.

JOHNSONIA—Dull brick red, with a star center.

Gladiolus.

These are among the most showy and brilliant of all bulbous plants. Nature is nowhere more lavish of her paint than upon the flowers of the Gladiolus. They

should be planted out of doors in the spring—never in the fall, as the bulbs will not stand freezing. They are, however, excellent for window culture, planted in vases, either singly or in groups.

Tuberose.

DOUBLE WHITE AND SINGLE—Flowers very fragrant. Late autumn.

PEARL—Its value over the common variety consists in its flowers being nearly double in size; imbricated like a rose, and its dwarf habit, growing only 18 inches to 2 feet. The fragrance and color same as common sort.

FLOWERING BULBS TO BE PLANTED IN THE FALL.

Crocus.

In various colors. Single and double.

Hyacinths.

Among the bulbs used for winter flowers, the Hyacinth stands foremost on the list. Two methods are employed in flowering the Hyacinth in winter, one in glasses filled with water, the other in pots or boxes of soil.

Jonquils.

Pretty varieties of the Narcissus, having a very agreeable fragrance; adapted to either pots or out-door culture. The bulbs being small, six or eight may be put in a six-inch pot.

Lilium (Lily).

The Liliums are entirely hardy, and with a few exceptions quite fragrant and most of the varieties are exceedingly beautiful.

AURATUM (Gold-banded Lily of Japan).

CANDIDUM (common white).

LANCIFOLIUM ROSEUM (rose spotted).

LANCIFOLIUM RUBRUM (red spotted).

LILIUM HARRISII — Bermuda Easter Lily. Pure white, trumpet shaped flowers very fragrant. The finest lily grown.

TIGRINUM, fl. pl. (Double Tiger Lily)—Bright orange scarlet with dark spots.

LILY OF THE VALLEY.

Lily of the Valley.

The Lily of the Valley is as hardy as any plant can possibly be, and when planted in the open ground will increase pretty rapidly. For the house we have what are called "pips," young roots with flowering stems, that will bloom in a few weeks after planting, and will flower well in baskets of damp moss, or potted. For the garden we can ship either in the spring or autumn.

Tulips.

Owing to the late spring frosts, bedding plants cannot safely be planted before the early spring flowering bulbs are through blooming. Without these bulbs, for one or two months of beautiful spring weather, our gardens would present a bare appearance. We know of nothing that for the amount of money invested will give a more gorgeous show during early spring, and there is nothing more easily grown than the Tulip. They thrive well in almost any soil. Should be planted during October and November.

DUC VAN THOL—Single and double, early and late.

MIXED.

PARROTS—named varieties.

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